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MEDICO-LEGAL ASPECTS OF CORONARY THROMBOSIS*

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While the physician is concerned chiefly with the care of the sick and the prevention of disease, he is not infrequently called upon to assist in the solution of questions outside these fields. Among such extra-curricular activities, not the least important is the part the doctor plays in courts of justice, for here his special knowledge is often indispensable in interpreting facts to which legal precepts may be applied. To be sure, our present day court procedure with regard to expert testimony leaves much to be desired. The physician is made to appear as a partisan or advocate, whereas his role should be wholly that of an impartial interpreter of matters with which he has special acquaintance. Nevertheless, however distasteful may be the position in which we are placed, the work is a necessary part of our profession and I conceive it to be the duty of us all to strive to make the administration of justice the best that it can be made.

I have undertaken to speak of the legal implications of a condition, the incidence of which has apparently increased rapidly in recent years. During the same period compensation and indemnity insurance has shown a corresponding spread with the inevitable result that the relationship of coronary thrombosis to stress of various kinds is of growing importance. The question of such a relationship presents itself as a rule in connection with workmen's compensation insurance, personal accidents and double indemnity coverage for accidental death. It has seemed to me that this problem has been greatly confused and that some attempt at clarification may not be out of place.

For generations, the idea that sudden heart failure is apt to follow physical or emotional stress has held sway both with physicians and laymen; and as coronary occlusion by thrombosis came to be commonly recognized it was naturally included in this category. One of the cases most often cited is that of John Hunter, who for twenty years suffered from angina pectoris and was accustomed to say that his "life was in the hands of any rascal who chose to annoy and tease him". He died suddenly at a board meeting in the midst of a controversy with a colleague. Numerous other similar instances have been recorded and it has been customary to consider any unusual circumstance that preceded or attended coronary occlusion as a precipitating cause.

In the past few decades we have learned much about coronary artery disease. We have come to regard angina pectoris as due to transient coronary insufficiency often provoked by effort or emotion. We have learned that coronary occlusion may occur and often does in patients who manifest only the symptoms of angina, especially when attacks occur at rest, and that these occlusions take place without symptoms or signs of infarction and may leave little or no significant scarring of the heart muscle. Though the exact mechanism of occlusion is not clear, it seems certain that hemorrhage into the arterial wall is a common initial event and that the extent and rate of such bleeding may determine many of the circumstances attending infarction. It is now also an established fact that infarction may occur without occlusion, depending apparently upon prolonged ischemia.

Notwithstanding some obscurity and considerable diversity of opinion as regards the nature of occlusion, one fact has become clear and is generally accepted and that is that thrombosis does not take place in coronary arteries that are normal. The

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XUM

occurrence of coronary thrombosis postulates coronary sclerosis as a preexisting disease, often symptomless but slowly progressive. A clear appreciation of this fact would prevent much of the misunderstanding that attaches to cases in which sudden occlusion is the first indication of trouble.

There are those who still hold that coronary thrombosis may be precipitated by any one of a variety of causes. Fitzhugh and Hamilton[1] cite a hundred cases of angina in which death or coronary thrombosis was preceded by some departure from normal habits of living. They list as departures unusual physical exertion, prolonged activity with fatigue, persistence in activities that had repeatedly caused angina, travel, emotional strain, alcoholic excess, over-eating, starving, acute infection, medication (notably with thyroid and bromides), and sexual activity. Boas[2] expresses a similar view and adds to the list of precipitating causes, allergy, exposure to cold, insulin shock and hypoglycemia, electric shock, high altitudes and excessive heat as in the case of a patient who developed his attack on leaving a Turkish bath. It is argued that effort or other stimulus sufficient to increase blood flow may initiate intra-arterial hemorrhage or the rupture of an atheromatous abscess and lead to thrombosis; also that angina induced by effort with consequent local ischemia may in some way predispose to thrombosis.

Such conclusions are based upon evidence that is wholly circumstantial, while the explanations offered are highly speculative. It could be maintained with equal logic that slowing of the circulation as occurs during sleep or rest predisposes to thrombosis and large numbers of cases could be cited in which this seems to happen. In fact, Luten[3] states as his belief that most cases of coronary occlusion occur under circumstances associated with lowering of diastolic pressure and lessening of systolic output. The question can hardly be settled on these conflicting theoretical considerations. Nor is the evidence offered in case reports convincing as most of the supposed conditions of stress are little more than the individual is accustomed to experience time and again in his daily routine of living. If the factor of physical or emotional strain is essential or even important in the production of coronary thrombosis, it should appear in a form sufficiently definite to be recognized as such and in an impressive proportion of cases.

Approaching the problem from another angle, Master *et al*,[4] from an analysis of the histories of 1440 occlusions with particular reference to activities preceding attacks, exclude exertion and emotion as precipitating factors. In 890 cases the attack occurred under the following circumstances: sleep 22.3 per cent; rest 31.1 per cent; mild activity 20.2 per cent; moderate activity 8.5 per cent; walking 15.8 per cent and unusual exertion 2 per cent. Sixty of these patients had attacks after being bed-ridden for weeks or months. Correlation of these percentages with the daily round of activities of the average person indicates that the onset of coronary occlusion is too well distributed to be connected with any particular circumstance of life and that any apparent relationship is purely coincidental. This observation is in accord with the experience of physicians generally and seems to argue overwhelmingly that, so far as bodily activity is concerned, coronary thrombosis is a purely fortuitous occurrence. It is the climax of slowly progressive arterial disease.

In recent years emphasis has been placed upon the occurrence of infarction of the myocardium as the result of coronary insufficiency independent of coronary occlusion. Theoretically, such a result might conceivably follow increased strain, yet Master *et al*,[5] in a review of 48 cases of acute coronary insufficiency leading to infarction, found no instance in which the attack seemed to follow unusual effort or excitement.

In the case of the industrial worker, covered by liberal compensation laws, who suffers an acute coronary occlusion, some strain, often trivial, is invoked as a cause or at least as a precipitating or aggravating factor. To the critical mind such a claim has little foundation. Coronary sclerosis, without which coronary thrombosis does not occur, is present in varying degree from middle life on and sooner or later a vascular accident of some type may be expected. Certainly no special strain on the heart or elsewhere is necessary as such accidents commonly take place during sleep. It is also to be remembered that coronary thrombosis occurs more frequently among sedentary workers than among those whose occupations entail hard physical labor. However, the heart already damaged by coronary thrombosis may fail more rapidly as the result of even mild strain and the evaluation of this factor poses a difficult question, particularly in industrial cases. In one State at least it has been held that

"acceleration of previously existing heart disease to a mortal end sooner than otherwise it would have come is an injury within the meaning of the Workmen's Compensation Act". This dictum literally applied means that any physical act may be an injury. In contrast the law of another State provide that "Personal injury shall not include diseases except where the disease is the natural and direct result of a traumatic injury by accident, nor shall they include the results of a preexisting disease." Such a statute seems just as it permits apportionment of responsibility for death or disability between injury and disease.

In the case of double indemnity for accidental death of those who have been injured and die of coronary thrombosis, the question should be relatively easy. Most double indemnity contracts provide that death shall result "directly and independently of all other causes, from bodily injuries effected solely through external, violent and accidental means". Death, therefore, that depends upon the factor of coronary sclerosis should not be covered under such a contract. Yet physicians can be found who are willing to testify that coronary thrombosis results solely from a comparatively trivial injury suffered some time previously.

Another important question that frequently confronts us at the present day concerns the degree of disability to be expected in those who have recovered from coronary thrombosis. Undoubtedly, a victim of this disease has undergone a nerve racking experience and may well entertain some anxiety about his ability to return to active life. Having been warned by his physician that the level of his activities must be lowered, he is oppressed on the one hand by the fear of further damaging his heart and on the other of inability to earn a living. If he has health insurance he immediately turns to it for comfort. But, when he finds that in order to secure its benefits he must be totally disabled and when his insurance carrier raises some doubt on this point, he often succumbs to confusion and develops a psychoneurosis which, aggravated by litigation, may be more disabling than his heart disease.

In dealing with cases of this character it is necessary to remember that a considerable proportion of those who suffer a coronary thrombosis recover and are capable of living active and useful lives. The occurrence of a coronary thrombosis is not, as was formerly thought, a death sentence, nor does it condemn an individual to a life of permanent invalidism. In those who survive, the question of disability is related not to the scar in the myocardium nor even to the permanent defect that may persist in the electrocardiogram but rather to the condition of the heart as regards enlargement and functional capacity. If there is marked hypertrophy or if there is shortness of breath or anginal pain on moderate exertion, of course there is disability; and in order to live within his limits it is often necessary for an individual to refrain from all gainful occupation—a condition of total disability. However, it is of the utmost importance in the patient's own interest to distinguish between symptoms which are caused by heart disease and those that result from an accompanying neurosis. The former may be helped by abstinence from work, while the latter are almost invariably relieved by termination of litigation and return to active life.

Willius[6] has called attention to court decisions, in connection with this question, that are based on "political prejudice rather than on scientific facts" and has urged upon the medical profession the responsibility of exerting every effort to present the true issues involved. Without doubt erroneous medical testimony has contributed largely to judicial fallibility. The doctor, through sympathy for a patient and friend or a kind of loyalty to the side that employs him or even through failure to familiarize himself with available knowledge of the subject with which he is dealing, may be easily led into statements wholly at variance with established facts.

Very recently the newspapers stated that a Congressman of seventy had died unexpectedly on Monday, having suffered a heart attack following the delivery of a speech the preceding Friday. The implication was that the making of the speech had some etiological connection with the fatal event; even though Congressmen are accustomed to making speeches and men of seventy commonly die unexpectedly at any hour of day or night. This, however, is the popular view. It is shared by many doctors and has influenced strongly the determination of much litigation. In fact, it seems fair to state that at the present day a causal relationship between some preceding circumstance and sudden death is assumed unless it is proved otherwise. Such an assumption has no basis in medical knowledge and should not continue to influence court decisions. If the burden of proof were placed on the claimant

XUM

rather than on the defendant, it seems probable that much injustice and genteel extortion might be prevented and much unnecessary invalidism might be avoided.

SUMMARY

As the result of long standing prejudice and conflicting current opinion, there exists today a widespread belief that coronary thrombosis is caused by stress of various kinds. This belief has been reflected in court decisions in connection with insurance claims and continues to color medical testimony. Facts, amply supported by clinical and autopsy studies, indicate that coronary thrombosis does not occur in normal vessels and is not precipitated in sclerotic vessels by factors that accelerate the circulation. Many individuals who have suffered a coronary thrombosis recover completely or partially and are not necessarily totally disabled.

It is suggested that in claims based upon the relationship of coronary thrombosis to accident or injury, the burden of proof be placed upon the claimant rather than upon the defendant.

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New Books.

The following books recently added to the Library of the Medical College of Virginia are available to our readers under usual library rules:

Annual Review of Physiology. v. VII. 1905.
Baruch—Das Wasser in der Aertzlichen Praxis.
Binger—The Doctor's job.
Carter—Night of flame (A novel).
Chandler—Introduction to parasitology. 7th ed. 1944.
Clayton—Electrotherapy with the direct and low-frequency currents.
Current Biography . . . 1944.
Cutler & Zollinger—Atlas of surgical operations. 1939.
Department of Neurology—Harvard Medical School. Vol. I, II, III & IV.
Foley, ed.—The Best American short stories. 1943.
Hamblen—Endocrinology of woman.
Horwitz—Infeccion meningococica en Chile.
Kupper—Medical state and national board summary. 1944.
Massachusetts General Hospital—Memorial & Historical volume.
Metropolitan State Hospital—Collected Lectures of the 70th Postgraduate Seminar in Neurology and Psychiatry.
Porter—Straight down a crooked lane (Novel).
Rumney—A study of the social effects of public housing in Newark, N. J.
Rypins—Medical licensure examinations.
Schurigio—Gynaecologia historico-medica hoc est Congressus muliebris consideratio.

Ask Doctors' Aid in Office Shortage.

To relieve the present shortage of available office space, practicing physicians are urged to share their offices with doctors who are returning from service.

An editorial appearing in the September 29 issue of *The Journal of the American Medical Association* said: "In large communities, such as cities of over 100,000 population, the problem is apparently far more serious than in the smaller areas. In some larger cities physicians are even remodeling old houses into office space. . . . Many a physician whose office is not fully utilized either in the morning or in the afternoon or even in the evening can make available time and space, as well as the use of his own facilities. . . . The least that can be done for such veterans is to make available to them an opportunity to begin the earning of a livelihood at the earliest possible moment."

A PLEA FOR OPERATIVE CONSERVATISM IN OBSTETRICS*

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Cesarean section is the suprapubic delivery of an intrauterine fetus. It is probably very ancient and has been practiced even among primitive peoples. Historically, it

(1) was very rarely resorted to, because it
(2) carried a prohibitively dangerous mortality for the mother, and
(3) was indicated only in the very smallest pelves, through which it was absolutely impossible to deliver a live baby, and almost impossible to deliver a dead one.

With the advent of antisepsis, asepsis, and the suture technic of Sanger, there has within my own lifetime been a tendency to change these historic facts by

(1) employing it much more frequently, because
(2) it is technically easy and is mistakenly regarded as a *safe* operation; on this account
(3) it is used for much more numerous and broader indications than formerly.

There is abundant reason for believing that this change in attitude has been so excessively sweeping as to create in many hands an actual abuse of a most valuable and life-saving operation.

It is further believed that this abuse is not because refinement of technic in cesarean section has not kept pace with improvement in other lines of surgery, but rather because it is all-too-frequently employed without discriminating judgment based on sound obstetric knowledge of the dangers, limitations, and indications for its use.

In attempting to evaluate the proper application of the operation for you, I will not attempt to discuss theories nor collected experience, but will confine my discussion, except for minor references to two other sources, to the experience of the single clinic with which I am connected. This experience embraces more than thirteen years, 73,703 living births, and 1,891 cesarean sections. I think this work is extensive enough to be significant. It has all been done under the responsibility of the same chiefs of service, who have consistently analyzed and learned from it. Our present attitudes may therefor be conceded to be mellowed and matured.

In the light of our own experience, let us examine the three primary factors of our discussion.

(1) Frequency: Our incidence is 2.81 per cent of live births for the whole period. Annual rates have varied from 2.49 per cent to 3.60 per cent.

Lull, in a 10 year study of 45 Philadelphia hospitals, finds the average incidence in the whole group to range from 2.43 to 2.88 per cent. In the 13 hospitals of this group handling the largest material, the rates varied from an almost unbelievable low of 0.57 per cent to 5.59 per cent; only two exceeded 4 per cent.

From this it may be reasonably concluded that any incidence in large groups of cases up to 4 per cent may be considered reasonably conservative. Any incidence much above this must be considered unwarrantably high.

(2) Mortality: An unfortunate tendency is widely prevalent to designate cesarean section as "elective". This word is defined by the dictionary as indicating a choice or selection in relation to several alternatives. Cesarean section, then, if "elected" in preference to vaginal delivery, *except for specific necessitous indication,* implies an equality of risk as between the two methods of delivery. Such implication is not valid. Our general mortality in relation to live births is 0.277 per cent. Our cesarean section mortality is 1.45 per cent—more than five times as great.

In the 13 largest groups of Lull's tabulation, the mortality rate varies from zero to 9.09 per cent, the average of all the Philadelphia hospitals in 1941, 2.46 per cent. This is almost *ten times* our average maternal mortality. In short, cesarean section is *emphatically not* an operation devoid of danger. Therefor it must *not* be employed at all except for real indication on the basis of careful individualization of each case.

(3) Indications: Here the historical value of the operation continues to be exemplified, for the most frequent proper indication for section, in our cases 56 per cent of the whole, is feto-pelvic disproportion. Ten and a half per cent, the second largest

*Read before the Peninsula Academy of Medicine, Newport News, Va., March 19, 1945.

group, is done for previous cesarean section. If the majority of the original sections in these patients were done for feto-pelvic disproportion, then nearly two-thirds of all operations are done for this indication.

But when we today speak of feto-pelvic disproportion, or disparity of size between the passenger and the passage, we do not refer to the time-honored "absolute contraction" of the pelvis through which a living child cannot possibly be born. Our standard of degree of contraction has properly been liberalized so that "disproportion" is now a relative term, applicable broadly to any situation where the mechanical circumstances of labor imply less damaging trauma to maternal soft parts and to the fetus, if delivery is by the abdominal route.

Hence the determination of such mechanical circumstances is in no sense determined by slide-rule estimation of the pelvic bones. Instead it depends on competent obstetric judgment compounded of knowledge of the shape and size of the pelvis, the size of the baby, the constitution of the patient, the efficiency of uterine function and a number of corollary factors.

Therefor, absolute prognosis prior to the onset of labor is seldom possible. Final decision must depend on actual observation of labor progress. Here, again, even in experienced observers, human fallibility sometimes causes an impassé where ultimate realization of the necessity for section brings the operator face to face with an inordinately high risk for his patient unless special variation of technic can be resorted to.

Our rule is that if a patient requiring cesarean section

(a) has been in labor more than 24 hours, and/or
(b) her membranes have been ruptured longer than 8-12 hours, or
(c) other circumstances attend the case which increase potential infective hazards,

then the patient should have the protection of extra-peritoneal approach.

This rule has been adopted because our surveys have shown sharp increase in morbidity and mortality when these time limits are exceeded in the application of other types of operation.

When cases fall within the indicated limits of time and circumstances, transperitoneal approach is permissible and is somewhat quicker and simpler in technic.

The same surveys of our cases have demonstrated that the most generally satisfactory variety of transperitoneal section is the transverse lower segment operation as modified from Munro-Kerr by Phaneuf and others.

Among other *mechanical* factors characterizing labor difficulty for which we have performed section are a variety of conditions—each accounting for but a fraction of 1 per cent of the operations:

(1) Rupture of uterus:
spontaneous
through old cesarean section scar
(2) Obstruction by neoplasms:
fibromyomata
cancer of cervix
(3) Obstruction by anomalies of soft parts:
congenital
resulting from previous surgery
(4) Uterine inertia—rare as only factor, but frequently coexisting with feto-pelvic disproportion, and when it does, contributing importantly to the failure of spontaneous delivery.
(5) So-called "cervical dystocia"—in my personal opinion hardly ever existing in the absence of neoplasm, post-operative cicatrices, etc. Should generally be recognized as feto-pelvic disproportion.
(6) Anomalies of presentation.

In the above computation of frequency of indication, disproportion in breech presentation has been included in the general heading feto-pelvic disproportion. For we do not believe that breech presentation per se, in either primigravidae or multigravidae, warrants cesarean section. True, the extra hazard to the fetus in delivery of the aftercoming head is conceded. So we would resort to section in breech presentation in the presence of lesser degrees of disproportion than we would think proper in cephalic presentation. But section is resorted to only when we seriously estimate that feto-pelvic disproportion actually does exist.

There are three important *non-mechanical* obstetric indications for section:

(1) Placenta previa. This was the indication in about 8½ per cent of sections. But this was only 35 per cent of all our previas. So that section is not invariably necessitated by placenta previa. It is so indicated

(a) When bleeding is very profuse and delivery

is not imminent;

(b) In central previa in the presence of an unprepared cervix, especially in primigravidae.

(2) Abruption of the placenta. Cases exhibiting this condition must be individualized as to management. They may be roughly grouped as mild (63 per cent), and severe (37 per cent), depending on the amount of hemorrhage, and degree of shock present.

In the mild group, seven-eighths of them may be properly managed by expectant treatment. Forty-two per cent of them will deliver spontaneously, somewhat more by relatively simple artificial delivery procedures. We have applied cesarean section in about 12 per cent of this group, principally when the babies were alive, to save the babies and to anticipate in the mothers, the development of mild cases into severe ones.

In the severe group, 22 per cent will deliver spontaneously, and about the same number by simple artificial interference.

In this group we have taken the decided stand that cesarean section finds special application as a direct means of saving mothers' lives. We have shown this by direct comparison of our mortality with that of Irving, the most vigorous exponent of more conservative management. This comparison follows:

SEVERE GROUP

	CONSERVATIVE			CESAREAN SECTION					
	CASES	DIED	MORTALITY PERCENT	CASES	DIED	MORTALITY PERCENT	CASES	DIED	MORTALITY PERCENT
Boston Lying-In	40	3	7.5	37	8	21.6	77	11	14.2
Mgt. Hague Mat. Hosp.	23	2	8.7	33	2	6.0	56	4	7.1

Of course it almost goes without saying that the proper management of all abruptions must be implemented by the most modern and vigorous measures to quickly replace blood and combat shock.

(3) Toxemias and associated conditions. Eclampsia itself is not only an indication for section, but is definitely a *contraindication* unless there is a concomitant mechanical indication. But fulminant and increasing pre-eclampsia, hypertensive toxemia and nephritis not infrequently justify the operation to promptly terminate their effects on the mother, and to salvage the baby.

Age of the mother in itself is not an indication for cesarean section. But in combination with other factors of difficulty it may *weight decision* to resort to section. Thus it would not be right to subject a forty-year-old primigravida experiencing perhaps her only chance of motherhood to the same margin of risk of fetal loss as might be justifiable in an eighteen-year-old girl. Section may be justified to save her from that risk.

Non-obstetric complications of pregnancy generally do *not* constitute valid indication for cesarean section.

Medical and surgical complications of pregnancy require appropriate medical and surgical treatment without disturbance of the pregnancy.

In some conditions, as in heart disease and tuberculosis, the duration and intensity of the medical treatment must be greater than in the non-pregnant. Even in operating for abdominal pathology late in pregnancy, the indicated surgical procedure must not be combined with surgical emptying of the uterus.

From what has preceded it is possible to reasonably postulate the contraindications to cesarean section as follows:

(1) We would wish to reemphasize that cesarean section, both in relation to the immediate event and to the outcome of subsequent pregnancies, is *not* generally preferable to, or as good for the mother as natural birth through the birth tract, or such birth aided by relatively simple mechanical means. The obstetrician should therefor never employ it:

(a) as a matter of his own convenience or because it may represent a larger fee than another type of delivery,

(b) because the mother or her family desire and insist upon it. Such desire and insistence arise from ignorance of the factors already

dwelt upon in our discussion of the relative danger of cesarean section.

(2) Cesarean section should not be employed on the unsupported advice of internists and roentgenologists. Only the determination of a really qualified obstetrician, or a practitioner qualified by considerable obstetric experience, should decide the issue.

(3) Section should seldom be resorted to in any except extreme degrees of pelvic deformity or disproportion without some actual observation of the patient's ability to deliver herself by the natural passages.

(4) It should generally not be employed in *eclampsia.*

(5) It should generally not be used on the sole basis of concomitant condition, as heart disease, or acute surgical complications.

(6) Section should not be employed as a rule in small or previable babies, or in full term babies actually dead or exhibiting such a degree of distress as to make their survival improbable.

The conservative attitude indicated with reference to cesarean section might properly, in my belief, extend to other forms of operative obstetrics. A more or less just charge has been laid against American obstetrics in general, particularly as exemplified in hospital practice, of a too high incidence of unnecessary artificial or operative interference. I believe that when such interference is unnecessary it is meddlesome and pernicious.

What I have said of the term "elective" as applied to cesarean section is equally objectionable as applied to such procedures as version and forceps extraction.

Happily the wave of enthusiasm which swept American obstetrics for so-called "elective version" a few years ago has largely passed and hardly deserves discussion now.

But the so-called "elective" or "prophylactic" use of forceps, has taken strong hold on the consciousness of many obstetricians and is resorted to, in my own belief, far, far too frequently. It may be true that in the hands of a few gifted and extensively experienced men capable of estimating the exact conditions under which such work is carried out, this procedure may not be specifically harmful. But I am certain that in average hands, including not only general practitioners without great obstetric experience, but even in the hands of many supposedly qualified specialists, the recognition of status and condition under which this operation is employed is too often inaccurate. Far too frequently unnecessary injury to the soft parts of the birth tract and to the tender contents of the baby's skull results.

In this connection, I think it is very, very wrong to apply absolute time limits to labor. So-called "rules" that the second stage must not be permitted to exceed a particular time limit is productive of much unnecessary and unwise interference. So long as a woman and her baby remain in reasonably good condition and can be maintained in such condition by appropriate supportive measures, the significance of the time elapsed in completing certain of the phenomena of the normal mechanism of labor is of small importance. No attempt should ever be made to limit the time occupied in the evolution of such phenomena by inflexible and arbitrary time limits. The spending of time to be sure that proper conditions for proposed artificial procedure are fulfilled is generally the wisest economy.

The question which the obstetrician should propose to himself in any case therefor is not, "What procedure shall I select by which to interfere in this case?", but rather "Is it necessary that I do anything to interfere with or modify the natural progress of labor?" That man will, I believe, be rendering best service to patients, who brings to their care in labor not a careless and neglectful assumption that everything will necessarily go well, but a generous amount of patience and a rigid self-interrogation as to the proven necessity, under the circumstances, of interference on his part with the generally beneficial and successful processes of nature.

SUMMARY

1. Historical status of cesarean section has changed in its modern application by reason of the refinement in surgical technic and broadening of indications. In general its use should not exceed 4 per cent of living births in large groups of obstetrical cases. The operation is still not devoid of considerable maternal risk.

2. The principal valid indication remains feto-pelvic disproportion in broader degree than formerly.

3. Other valid indications include miscellaneous mechanical factors, and non-mechanical obstetric indications including placenta previa, abruption of placenta and certain toxemias.

4. Non-obstetric complications of pregnancy seldom justify cesarean section unless some of the other

factors indicated above as valid co-exist with them.

5. Section is *contraindicated*

a—for convenience
b—for fee
c—for patient's preference
d—for non-obstetric judgment
e—generally without test of labor
f—where baby is too small, previable, dead, or nearly so.

6. Conservatism is similarly necessary in respect to other artificial interference, as, for instance, version and forceps.

7. Inexpert estimation of proper situations and conditions for these procedures is fraught with danger.

8. Time limits for particular labor phenomena are not valid and may lead to much unnecessary and harmful interference.

9. Obstetrician should ask himself, "It it *necessary* that I do *anything* to interfere with or modify the natural progress of labor in this case?"

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Walter Reed General Hospital Opens Swimming Pool.

The second phase of a three-unit reconditioning program was completed recently when a new indoor swimming pool was opened at Walter Reed General Hospital, Washington, D. C.

The primary purpose of the new pool is to provide water therapy for patients. The first unit of the reconditioning program is a gymnasium, and the third is a reconditioning building, which should be completed by the end of this year.

Twenty-Seven Hundred Doctors Released During September.

During September and the first four days of October, the Army Medical Department has separated 2,700 doctors from the service and by Christmas it is expected that 14,000 doctors will have been separated, Brig. General Raymond W. Bliss, Acting Surgeon General of the Army, stated recently before the House Military Affairs Committee. Through the months of July and August approximately 1,300 doctors were released.

General Bliss pointed out that in proportion to the Army's 45,000 doctors on VE-Day, there are now 43,000 in service, 2,000 of whom are recent graduates of medical schools. With the high hospital load in this country, a large number of doctors are needed to staff hospitals and separation centers, which are now at peak operation. These centers require a total of 2,000 doctors.

Stating the approximate total of patients still in Army hospitals to be 400,000, General Bliss concluded, "You cannot treat patients without doctors. . . . According to the laws of Congress you cannot separate men without doctors. . . . By Christmas we will have reduced the number of doctors by at least 14,000, which represents more than 30 per cent of the total corps. At the same time, we will continue to meet our first and foremost responsibility to give the American soldier the best medical care that any soldier in any Army has ever received."

The Winthrop Chemical Company

Has purchased a 60-acre site at Rensselaer, N.Y., on which they plan to have new research laboratories, costing more than $2,000,000. Construction will begin in the Spring and it is expected to be completed within a year. This will replace the present laboratory facilities, but will have many improvements and be much larger. It is stated that 350 scientists will be employed exclusively on research, as compared with the present number of 175.

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HEARING AIDS, THE OTOLOGIST'S PROBLEM*

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Before approaching the consideration of hearing aids, let us review briefly some of the elementary facts that we have learned about the hearing function and hearing loss.

Between the drum membrane and the membrane of the foramen ovale into which is fitted the footplate of the stapes the power of sound vibrations is multiplied sixty fold. Beyond the ovale window these intensified air vibrations are transformed into waves in the perilymph and endolymph, setting in delicate motion the more than 20,000 hair cells of the organ of Corti. Here the mechanical vibration of sound is converted into nervous energy or, perhaps, a form of electrical energy which is carried off from the organ of Corti along the fibres of the auditory nerve to the acoustic ganglion cells and thence to the hearing centers in the temporal lobe of the brain where the impulses are transformed into the sensation of sound. There is a close analogy between the function of hearing and the function of sight. The Great Planner has used a similar design but has varied the blue print to meet the diverse demands of the forces impinging on our senses. Even as light is broken up in the retina into its component wave lengths and then synthesized in the brain as color and form, so likewise are the sound waves of various cycles (frequencies per second) caught by the hair cells in the cochlea in its ascending spiral winding around the modiolus.

We have not yet fully penetrated the mystery of sound perception. We find that the basilar membrane, supporting and forming part of the Corti's organ is shortest at the basal turn of the cochlea and gradually lengthens as it winds upwards. We find that where there has been loss of high frequency tone perception the hair cells at the base of the cochlea show evidences of degeneration. And so we reason that this wonderful organ, consisting of an intricate pattern of microscopic cells and delicate membranes, is a sort of living keyboard with a tone scale capable of perceiving the highest pitched notes at its base and the progressively lower notes in descending octaves as the membrane lengthens and becomes less tense in its upward spiral ascent. The sound of my voice as it strikes your ear drums consists of a great number of frequencies, by which I mean that it is not a one-pitch tone but a combination of many pitches having various frequencies or wave-lengths. Some are low frequency vibrations, and some are vibrations of higher and higher frequencies. The human ear has the power to perceive tones as low as 18 cycles per second and as high as 18,000 and more. That is a scale of eleven octaves whereas the piano keyboard has a range of something over seven octaves. However, we do not ordinarily use these eleven octaves of our hearing power. The tones of everyday conversation are compressed into the much narrower range of 250-4,000 frequencies per second though musical sounds go lower to 128 cycles and rise to over 8,000 cycles per second. Our ears are constantly being assailed by floods of sound. By far the greatest portion of these sound waves never pass the barrier of our delicately attuned sense organ. They are screened out. What goes through are the frequencies that are comprised in speech, in music—and all the sounds we live with.

All these cycles pass through the magic portals and are gathered together in our brain centers as living, understandable sound. Somewhere along this pathway there may be a break or an impediment and we recognize deafness or hearing deficiency. It is conductive deafness if there is an obstruction in the external auditory canal or a lesion in the middle ear affecting the drum or the ossicles—acute or chronic catarrhal or suppurative middle ear inflammations, a perforated ear drum or an intact ear drum with middle ear adhesions tying it down to the ankylosed ossicles. Or we may have otosclerosis with fixation of the stapes footplate and spongification of the labyrinth capsule.

In perceptive deafness which may exist *per se* or be an accompaniment of progressive conductive deafness we have degeneration of the sensory nerve endings in the cochlea or in the acoustic ganglion cells, in the fibres of the auditory nerve or in the hearing centers in the brain.

It is our business through careful history taking

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and painstaking examination to locate the lesion or lesions.

Upper respiratory infections are the most common causes of damage to the sensitive hearing apparatus, the exanthemata take their toll of infected middle ears. Many systemic diseases invade the inner ear and cause nerve deafness. Drugs like quinine and the salicylates often produce serious ill effects. The acoustic trauma induced by noisy industrial occupations and still more by the military hazards of high explosives and by the pressure effects of air warfare is a factor to be reckoned with more and more seriously as contributing to the ever-increasing number of ear casualties. We must study each case thoroughly and scientifically to ascertain the kind and degree of hearing loss. Does our patient suffer from conduction or perception deafness or the more common mixed type? How much residual hearing has he left and in which frequency areas? What can we do for him medically through nasopharyngeal and aural treatment?

At what point and on what grounds must we say to him: "You need a hearing aid to conserve the hearing remnant you still have and to save your speech from deteriorating because your brain does not receive many of the essential speech tones and will in time lose the memory and understanding of those sounds!" We must say to him or to her: "The longer you postpone the use of an hearing aid the more difficult it will be for you to adjust to it when you do get it. It will bring you back into a world of unfamiliar sounds and noises. You will have to be re-educated to understand those sounds again and to make sense of them. It will be like recalling a language that you have known long ago and forgotten. Moreover, you will hear many background noises that the ear normally disregards and ignores. the hearing aid will bring these noises to your ear along with the speech and music that your heart is craving to hear and will have lost the blessed faculty of screening out those sounds that your brain rejects. That faculty will come back to you after a while but slowly and painfully after much patience and self-education. So, "be well-advised," we say to our patient, "have yourself fitted with a suitable efficient hearing aid and save yourself much future trial and tribulation."

That is sound advice but we have to back it up with a complete analysis of the case. We are delinquent in our professional duty if we say to the patient with an otosclerosis or any form of progressive deafness, be it middle or inner ear: "Go and get yourself an hearing aid," and so wash our hands of the case. The competent otologist will give that deafness case as diligent and conscientious a check-up as if his own precious hearing were involved. Today we are derelict as physicians and as otologists in our duty to these 15 million of our people, men, women and children, who have definite loss of hearing in one or both ears. Most of them do nothing about it and seek to hide the sign of their affliction as if it were a thing of shame. Some go to the salesmen and the department stores for the advice and help that we alone are scientifically equipped and legally empowered to give. This is not said in criticism of the men who make and market the wonderful little instruments that are available today. It is at my own profession that I am pointing the finger of blame. We are not yet fully awake to the duty and responsibility that is ours.

During World War I, hearing casualties totalled about 50,000. In this present far more terrible conflict it is conservative to estimate that probably a quarter of a million men will have suffered partial or total loss of hearing.

The problem will be ours to solve. On our profession will fall the burden of the task to help and rehabilitate these casualties as well as the increasing number of civilians who are becoming more and more conscious of their hearing disabilities through press and radio propaganda. This publicity, sponsored largely by the hearing aid manufacturers serves a highly useful purpose in breaking down the resistance of most people to wearing a device that would advertise their defect. However, like most lay publicity concerning human ailments there is a great deal of misinformation and distortion of fact which it is our professional duty to correct.

Recently the reports of the fenestration operation appearing in the lay press have aroused a high degree of popular interest. It is stated that the largest percentage of deafness is due to otosclerosis and can be cured by the fenestration operation. The hazards and uncertainties of the operation are minimized by these lay reporters. The public is led to believe that a simple operation has been devised and that it is a cure-all for most cases of deafness.

Actually, as we know, otosclerosis is not the larger percentage of the total number of the hard of hearing. By far the greatest number have lost their

XUM

hearing from many other causes, infective, traumatic and systemic. Moreover, the indications for the fenestration operation are limited to a restricted number of selected cases where the nerve function has not been seriously affected. This rules out the vast number of perceptive deafness cases as well as the mixed type of hearing loss. Furthermore, the hearing improvement in these selected cases is an average of 24 decibels in 80% of those operated on. It is interesting to note here that suitably fitted hearing aids in cases having not more than 50% hearing loss will show an average improvement of 35 decibels or better. And this group is vastly greater than those amenable to operation. But we are not here discussing the fenestration procedure with its necessarily limited scope and inevitable surgical hazards. For the far larger proportion of our deafened people, civilian and military, aged and young, we have the boon of science in the form of the electronic vacuum tube hearing aid which can bring the blessing of better hearing to at least three million of those involved.

How do we ascertain which patients should or should not wear an hearing aid?

By a complete examination consisting of:

1. The history of the case, and I need not tell you, my colleagues, what that signifies. It should bring out every fact, familial or personal, that might shed light on the origin and nature of the trouble.
2. An examination of the nose, throat and ears that would uncover any pathology or abnormality.
3. The use of the tuning fork tests, especially the Rinne for the comparison of air and bone conduction, the Schwabach for the measurement of actual bone conduction and the Weber for lateralization.
4. The audiometer test which tells us more precisely the degree of deafness as well as the frequencies involved.

No hearing aid can or should be fitted without a carefully prepared audiogram. There are department stores and opticians who sell hearing aids as if they were spectacles to be bought over the counter. That is a pernicious practice which we have to combat by publicity, by education and by legislation.

The audiogram must not only be carefully charted but also very judiciously interpreted.

A conduction deafness will give us an air conduction loss in the lower tones, an increased or normal bone conduction in these tones, while the higher tones or pitches are unaffected. In perception or nerve deafness we have a loss in the higher frequency tones. Most cases show various combinations of low and high tone loss depending on whether the lesion is in the middle or inner ear or the nerve pathways. The frequency loss is measured in terms of decibels, and a decibel, to put it simply, is the minimum intensity of sound to cross our hearing threshold.

The two curves—air and bone—give us a clear picture of the nature and degree of hearing loss and in what regions of frequency there is still usable residual hearing. A very quiet or preferably a sound proof room is essential for making an accurate and altogether dependable audiogram. There may be a difference of 20 decibels in charts made in sound proof rooms as compared to the ordinary office. That is particularly important in the controlled speech tests which should be given before and after fitting the hearing aid. Needless to say, most hearing aids are sold today without such painstaking and precise scientific conditions, and that may be the reason why so many aids are discarded after a few weeks or months by disappointed and discouraged purchasers.

There are several vital questions that we expect to clear up by the study of our audiogram and we must feel that we can rely on its testimony. Is the hearing deficiency sufficient to warrant the use of an aid? Experience has taught us that where there is less than 25% hearing loss in each ear the instrument is not indicated. Also, where there is a loss of 75% or over a hearing aid will rarely prove of any value and we must resort to lip reading. As unbiased physicians we are in a position to give such essential advice. We have no commercial axe to grind. We are also called upon to decide which ear to fit and whether to employ an air conduction or a bone conduction receiver. The ear with the poorer hearing should always be fitted providing this ear can be improved by at least 35 decibels and also if the better ear still has some serviceable residual hearing. This gives us the advantage of binaural function. However, if the poorer ear is below the level of possible improvement we fit the better ear.

Air conduction receivers are indicated in the vast majority of cases. Bone conduction receivers should be used only where there is a discharging ear or

where the bone conduction is more than twice the strength of the air conduction; or to put it in another way, where the air conduction is about 40 decibels lower than the bone conduction.

The importance of making a careful bone conduction audiogram need not be stressed before this group. It is well known that lessened bone conduction signifies pathology in the inner ear. It is unfortunate that little or no attention is paid to the bone conduction by the hearing aid salesmen. In the final analysis it is the comparison between the air hearing and the bone hearing graph that gives us definite indication of what to advise.

And now for a brief word about the hearing aid itself. Essentially it is a telephonic or radio contrivance designed to intensify the volume of sound reaching the ear. It is indeed a far cry from the ear trumpet and speaking tube of a past generation. In the modern hearing aid the sound waves are first converted into electrical energy in the transmitter. Here there is a microphone in which a diaphragm is set in vibration by the sound waves; these vibrations are transformed into electrical energy by the action of the crystal in the microphone. The electrical energy is amplified by the midget vacuum tubes using the current supplied by a 15 volt and a 45 volt battery. This amplified electrical current is carried by the cords to the receiver where a diaphragm and a coil-enveloped magnet convert the electrical energy into mechanical vibrations again. These produce the sound waves which enter the ear canal through the ear piece connected with the receiver. The hearing aid is a marvelous little precision instrument. It does not merely intensify the sound, it can also select the frequencies that require amplification and attenuate the other frequencies that need to be soft-pedalled. Most selective amplification is in the area of higher frequencies—from 1000 to 3000 cycles—the consonant area so vital to intelligible speech. The lower frequencies play a much lesser role in speech production and here the amplification must be reduced. Common noises are in the lower cycle region and must be dampened to avoid their masking the more delicate tones in vocal and musical sound.

It is these higher frequencies that suffer in perceptive or inner ear deafness as well as in the large group of mixed conduction and perception hearing loss such as we find in the progressive deafness of old people.

In summary, the fitting of the hearing aid must select the area of residual hearing that requires amplification. It is accomplished on the basis of the audiogram as well as the controlled speech test in a very quiet or sound proof room. The modern vacuum type of hearing aid is equipped to provide this selective amplification by various delicate adjustments for frequency, tone control and sound volume. But the matching of these adjustments to the individual characteristics of the patient's hearing is more than half the battle. It calls for the knowledge and experience of an otologist plus the special training and skill acquired in the study and application of these magic little instruments.

May I digress for a moment to remark that if this sounds like a lot of time and trouble it is regrettable that there is no royal road to an adequate and dependable hearing aid fitting. May I humbly suggest to my beloved, adopted State of Virginia that with its two splendid medical schools with their magnificent hospital facilities it is entitled to have and should have a deafness prevention or hearing aid clinic to which we could send our hard-of-hearing patients—indigent and paying—for consultation and scientific fitting.

In the course of my investigation and survey of the present hearing aid situation I have come to realize more strongly than I ever did before that our problem, the otologists' problem, is not just the question of hearing aids but the entire field of defective hearing. These things are being highly publicized, in lay periodicals, over the radio and through the advertising and high-pressure salesmanship of the hearing aid manufacturers.

We are being asked about the resounding claims that are being made for the fenestration operation and it behooves us to know and weigh the evidence and to steer our patients away from the choppy sea of sensationalism into the harbor of truth and fact. People are being told fantastic tales about what hearing aids will do for their deafness. We otologists must give the answers or they will be given—and are already being given—by those honest well-intentioned citizens who have something to sell.

This is an era of marvelous advances in medical science. How blessed are the younger men who have these new tools and instrumentalities for the alleviation and cure of human ills. And how pleasant it is for us older men to contemplate these phenomenal changes, to compare them with the less adequate

XUM

means at our disposal in the past, and to feel that we are still here to share in these medical triumphs and to benefit our patients through their use. In otology we marked time for decades. Our advances lay rather in retrenchment and growing conservatism. In the field of hearing deficiency we felt baffled and beaten. We gave routine treatments in which we had little faith and from which the patients derived little or no benefit. During the last ten or fifteen years we have gone ahead far beyond anything we dared to hope or dream. Magic new drugs have banished the spectre of therapeutic nihilism from our thinking and doing. The incredible advances in radio and electronics which have been applied in the field of hearing aids have dispelled the shadow of silence and isolation from countless thousands of deafened men, women and children. There is no greater human tragedy than loss of hearing. Silence may be golden if we are not condemned to it everlastingly. To be cut off from living sound is to sit alone and to walk alone and to be denied that warm and vital communication which only the voice and the hearing can provide. So we older otologists who have gone through years of helplessness and frustration in our endeavors to alleviate the wretchedness of deafness can best appreciate the wonderful new devices put into our hands by science. We must thoroughly understand these little precision instruments; we must contribute to their perfection, and it is our task as otologists to apply them to meet the needs of the hard of hearing.

Bad Posture Undermines Health.

Poor posture is ugly, fatiguing and damaging to the health, according to the October issue of *Hygeia,* the health magazine of the American Medical Association.

Jerome S. Peterson, M.D., district health officer in New York City's Department of Health and an associate of the Long Island College of Medicine, cautions that "poor health, depressed mental attitude and bad posture seem to go together."

Poor posture is usually associated with sloppy habits, laziness and inefficiency whereas the healthy, happy and successful person is always pictured as one who walks with head erect and chest out. Moreover, bad posture will throw the body out of alignment and may do serious damage to the internal organs as a result of unnatural compression. Thus, not only your health and appearance are affected, but poor posture is usually taken as a reflection of your personality.

Dr. Peterson's formula for improving the posture is: "Stand correctly; stand as tall as possible without rising on your toes. Get your feet a few inches apart and point your toes forward. Hold your head up. Bring the chin in. Your chest should be up. The lower abdomen should be in and flat, but don't strain yourself and don't become stiff. Let your hands hang loosely at your sides. Be conscious of your posture, but try to be relaxed at the same time."

Most of Pacific Casualties to Be Home by Christmas.

Most of the 3,000 battle casualties still remaining in the Pacific will be returned to the United States within sixty days, and all other transportable casualties are expected to be home by Christmas, according to a recent announcement by the War Department.

Some Army hospital ships are being shifted from the Atlantic to help speed up the transportation of sick and wounded from the Pacific area, increasing the present total of Pacific-operating hospital ships to twelve. However, a number of ships are to be kept in the Atlantic to meet the needs of occupation forces.

XUM

SOME OBSERVATIONS IN THE CLINICAL USES OF PROSTIGMIN*

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Newport News, Virginia.

Prostigmin has been used in the past mostly by the surgeons. Only relatively recently has its applications in other conditions opened another field of its usefulness. Chemically prostigmin is pharmacologically and physiologically related to physostigamin.

Its use in the field of obstetrics as a diagnostic aid of pregnancy is being well established, and its reliability has become so dependable that it has as high an accuracy as other more complicated procedures. In the absence of pelvic pathology and endocrine imbalance, the absence of the menses can be very quickly terminated by the simple injection of prostigmin methylsulphate, intramuscularly, either daily or every other day. Every case that I have used it on, with no pelvic pathology where menses failed to appear, was pregnant. It can be used with impunity, speaking from my experience and that of others. It will not cause abortion even in the earliest periods of gestation.

There are several methods of explaining its actions. However, I think one of the most logical is that of Carapetyan. We know that for cyclic menstrual bleeding there must be a hyperemia of the uterine tissues. Estrogens and estrogenic-like substances release acetylcholine, and, in turn, acetylcholine produces hyperemia of the uterus.

There are non-specific agents that have as their action the potentiating of acetylcholine. Prostigmin apparently has just such properties. On this basis, I have justified my use of the drug in cases of simple amenorrhea for relief of premenstral congestion and as an early diagnostic agent for pregnancy.

Case 1. Mrs. G. D., white, female, age 23, was seen on May 28, 1943, complaining of pain in sides and female trouble. Examination showed enlargement of uterus. Impression was due to possible pregnancy. Patient was seen two weeks later on June 11, 1943. Examination confirmed pregnancy. The patient was given 1 c.c. prostigmin, which was repeated June 12, 1943 and June 14, 1943. There were no signs of the menses. The patient was diagnosed as pregnant and delivered eight months later, N.S.D.

Case 2. Mrs. R. S., white, female, age 28, was seen on June 15, 1944, with history of L.M.P. April 30, complaining of pre-menstrual cramps, but no signs of menses. Pelvic examination revealed no pathology. The patient was given 1 c.c. prostigmin, and told to return in two days. The patient called back by phone to report menses started within 12 hours after injection.

Case 3. Mrs. L. T., white, female, age 32, came in September 9, 1944, with history of delayed menses of two weeks and with pre-menstrual cramps and discomfort. She was given 1 c.c. prostigmin. Menses started with 24 hours.

Case 4. Mrs. L. M., white, female, age 30, was seen for the first time June 16, 1944, with history of L. M. P. 6 weeks previously. This patient was delivered the year before, N.S.D., the menses having been irregular ever since. The patient was given 1 c.c. prostigmin every 4 days for 4 injections with no recurrence of menses. Six weeks later examination proved pregnancy of 2½ months.

Case 5. Mrs. H. L., white, female, age 28, was seen for the first time on June 10, 1944, chief complaint being the absence of menses for five weeks. There was no pelvic pathology. She was given 1 c.c. ampules of prostigmin every other day. After delay of 10 days, normal menses returned and have been regular since.

Case 6. Mrs. R. P., white, female, age 43, was seen on September 18, 1944, with history of L. M. P. July 26, 1944. The patient was a fat, multiparous individual on whom pelvic examination was unsatisfactory. The patient was given 1 c.c. prostigmin on September 20 and 23. The patient was not seen again until October 25, 1944, at which time a diagnosis of pregnancy was made.

In two cases of mine in which there was gall bladder tract pathology, I was able to get considerable relief of pain, intestinal distention, and just plain nausea and vomiting. The possible action is that it overcomes intestinal distention that is caused by the gall bladder itself.

Both of these patients were failures as far as medical therapy was concerned. However, with

*Read before the Seaboard Medical Association of Virginia and North Carolina at Wilson, N. C., December 5-7, 1944.

XUM

prostigmin the pain and abdominal discomfort were markedly improved. Possibly in border-line cases of surgery, or those in which surgery at any specific time is inadvisable, this may be the procedure of choice. There are times when there is a reflex action set up by a poorly functioning gall bladder. Through some action prostigmin blocks this, and relief, temporary in nature, is set up.

Case 1. Mrs. R. J., white, female, age 36, was seen with typical gall bladder pain, discomfort, intestinal stasis and vomiting. She had a previous history of gall bladder removal on October 28, 1943, with returns of symptoms as stated above on April 20, 1944. In view of the history of gall bladder removal the patient was treated unsuccessfully throughout the following months, up to October 6, 1944. At this time she was given 1 c.c. prostigmin and prostigmin bromide 15 mg., tablets 1 t.i.d. The 1 c.c. prostigmin by hypodermic was given every other day, giving her almost complete relief of pain, nausea and vomiting. Up to October 6, 1944, an effort was being made to prepare patient for exploratory laparotomy. In spite of relief of symptoms, the exploratory laparotomy was proceeded with as planned. A mass of adhesions binding the stomach to area of gall bladder stump was found and freed. It is interesting to note that in spite of all the surgical adhesions causing a partial obstruction, the patient obtained extremely satisfactory results from prostigmin.

Case 2. Mrs. L. J., white, female, age 43, came in on June 3, 1944, with typical history of gall bladder discomfort and complaint. She was tried on syntropan, bilron, and gall bladder diet, with no marked change of symptoms. She was checked again on June 8, 1944, and the same symptoms were found. The patient was seen on June 10, 1944, and given 1 c.c. prostigmin which was repeated on June 12, 1944, with the result that the patient's symptoms disappeared. The patient returned on October 25, 1944, with recurrence of symptoms and was given 1 c.c. prostigmin on 25th, 27th and 31st, with relapse of abdominal pain and gall bladder discomfort.

A possible new field may be opening up in the use of prostigmin for sprains and spasms and trauma, especially low back muscular spasms due to strains and trauma, in absence of fractures or bone pathology. I have had considerable relief in a short period of time by use of prostigmin. It has been described to me as an ironing out of the pain. The typical case comes in complaining of pain in the back with history of fall, wrenched back or strained back. When examination eliminates any pathology but muscular spasm, I strap the back and give 1 c.c. prostigmin every other day for 3 to 6 doses. Supplemental maintenance medication is given in the form of prostigmin bromide 15 mg. t.i.d. The clinical response is most dramatic within the first few hours.

Case 1. Mr. N. M., white, male, age 30, was seen on November 6, 1944, complaining of severe pain in lower back for five days. His history revealed no traumatic injury. The back was strapped for relief. The patient was given 1 c.c. prostigmin and tablets of prostigmin bromides, 15 mg. t.i.d. and plain aspirin. On November 8 and 10, 1 c.c. ampule of prostigmin was given. The patient noted improvement and stated that within a few hours his back felt easier, cool and relieved. The patient was discharged on November 12, 1944, cured.

Case 2. Mrs. J. B., white, female, age 40, came in on July 29, 1944, with history of arthritic-like pains in joints and lower middle back. The patient was given 1 c.c. prostigmin then, and again on July 31 and August 4. A maintenance dose of prostigmin bromide of 45 mg. a day was given to patient. This patient obtained only moderate improvement and some relief of pain. However, since her husband was in the Navy, she transferred to the Naval Hospital in Norfolk.

Case 3. Mrs. M. W., colored, female, aged 28, was seen for the first time on October 31, 1944, complaining of severe low back pain. Examination revealed no pathology, and the kidneys were negative. Her back was strapped and she was given 1 c.c. prostigmin and 15 mg. prostigmin bromide t.i.d. The patient was also given ten capsules A.S.A. with codeine gr. ¼, on first visit, to be taken every six hours. Additional injections of prostigmin were given on November 3, 6, and 8, with result of considerable relief of spasm and pain. Improvement followed within 2 hours of first injection, and continued improvement followed each injection. The patient was discharged on November 10, 1944, cured.

Case 4. Mr. W. W., white, male, age 57, was seen on September 17, 1944, complaining of low back pain, with history of straining back by means of heavy lifting. The patient was given an injection of prostigmin on September 18, 20 and 23, along

with a daily maintenance dose of prostigmin bromide 45 mg. The patient was entirely relieved of symptoms and was discharged September 25, 1944.

Case 5. Mrs. V. R., white, female, age 33, was seen for the first time on July 31, 1944, with low back pain and a history of straining back with lifting. Examination revealed no pathology, and kidneys were negative. She was given prostigmin 1 c.c. and prostigmin bromide 45 mg. daily. On August 2, 1944, a second injection of prostigmin was given. A maintenance dose of 45 mg. prostigmin bromide was continued for 10 days. She was greatly improved after 2 injections and was discharged on August 12, 1944, cured.

Case 6. Mr. D. Y., white, male, age 34, was seen for the first time on September 13, 1944, when he gave a history of strained back. Examination revealed no pathology. He was given 1 c.c. prostigmin and was greatly relieved and improved. The patient was discharged on September 15, 1944.

Case 7. Mr. T. R., white, male, age 30, was seen on July 26, 1944, for the first time. He gave a history of pain in lower back. The examination was essentially negative. He was given prostigmin 1 c.c. and prostigmin bromide 45 mg., and, in addition, salicylates, grains ten, every four hours. He was seen again on July 28, 1944, at which time another ampule of prostigmin was given. The patient stated that prostigmin eased the pain in his back immediately, but after a few hours the pain returned, slowly. This was improved by prostigmin on July 28 and strapping of his back.

Case 8. Mr. R. B., white, male, age 30, was seen for the first time on October 30, 1944, giving history of strained back. He was given 1 c.c. prostigmin and 15 mg. prostigmin bromide t.i.d. The patient was seen again on November 1, 1944, and his back was strapped, due to the necessity of his returning to work. An ampule of prostigmin was given. On November 3, 1944, another ampule of prostigmin was given. The results were fair in this case, as the patient returned to work. The patient stated that he had definite feeling of relaxation of spasms in his back.

Case 9. S. J. colored, male, age 65, was seen for the first time on October 2, 1944, complaining of backache. Examination revealed most of the symptoms were due to old rheumatoid arthritis. The patient was given 1 c.c. prostigmin and prostigmin bromide 45 mg. daily, and salicylates in the form of salicionyl, drams 1, every 6 hours. He was seen again on October 4 and 6 and 1 c.c. prostigmin was given. The patient states the injections definitely helped him and eased the pain in his back. He was financially unable to continue injections.

Case 10. P. M., colored, male, age 28, was seen for the first time on September 13, 1944. He gave a history of traumatic back injury due to lifting heavy basket of drugs and supplies. Physical examination revealed no fracture or pathological disturbance. The patient was given 1 c.c. prostigmin and prostigmin bromide 45 mg. daily, and back was strapped. This patient got excellent results, the pain easing within 3 hours after the first injection. Maintenance dose of prostigmin bromide was supplemented every other day by 1 c.c. prostigmin. This patient did well and was given 8 injections—one every other day—and was about able to return to work when he made a false step and fell, causing terrific muscular spasm and pain in his back. This was remarkably improved by additional prostigmin and prostigmin bromide and patient was able to return to work in two weeks. This same case had a similar back injury two years previously when he was away from work for three months. This happened to be a compensation case in which his salary was paid as long as he was out of work; however, the patient was so improved that he preferred to return to work.

Case 11. Mr. R. K., white, male, age 43, was seen for the first time on November 1, 1944. Six years ago this man had a removal of the left leg at six inches above the knee joint and has an artificial limb. On October 30, 1944, he had a terrific fall with his whole weight going on the shoulder girdle. He had spasms of biceps, triceps, deltoid, pectoralis major and minor muscles. He was given prostigmin 1 c.c. on November 3, 6 and 8, at the end of which time he had free movement of arms, shoulders and all muscles involved in the shoulder girdle. Marked relief was noticed within a few hours after the first injection.

SUMMARY

Prostigmin methylsulfate 1:2000 is a 1:200 solution of dimethylcarbamic ester of m-oxyphenyltrimethylammonium methylsulfate. It was introduced as an aid to help in stimulating intestinal peristalsis. However, its use has been extended and it is of definite help in many fields outside of surgical service. It is of use in obstetrics, gynecology, ortho-

XUM

pedics, internal medicine and others.

1. It is a diagnostic test for pregnancy.

2. In two cases of gallbladder pain it was of definite benefit in relieving pain, distension and discomfort.

3. In low back pain, with muscular spasm, it is of specific help.

4. It is not curative in cases of actual pathology of the back, such as bony changes, fractures or disease, but is of help in relieving spasms of back muscles.

5. The possible action is that prostigmin acts in some manner at the myoneural junctions to potentiate the normally occurring acetylocholine presumably by an inhibiting action upon the cholinesterase.

3117 West Avenue.

New Books.

Recent additions to the Library of the Medical College of Virginia include the following, which are available to our readers under usual library rules:

Advances in enzymology. v. V. 1945.
Appel-Strecker—Practical examination of personality.
Bailey—Notable names in medicine and surgery.
Baker—Traphagen—Behavior-problem children.
Binger—The doctor's job.
Criep—Essentials of allergy.
Crocker—Flavor.
Cyriax—Deep massage and manipulation illustrated.
Fishbein—Doctors at war.
Graham—Earth and high heaven (a novel).
Hartnack—Unbidden house guests.
Haymaker—Peripheral nerve injuries.
Herrell—Penicillin and other antibiotic agents.
Hingson & Lull—Control of pain in childbirth.
Howell—Speed in animals: their specialization for running and leaping.
Jameson—Gynecological and obstetrical tuberculosis.
Krieg—Functional neuro-anatomy.
Krueger—I was Hitler's doctor.
Lull—Control of pain in childbirth.
Munoz & Charipper—The microscope and its use.
Musser—Internal medicine, its theory and practice. 4th ed. 1945.
Ochsner & Mahorner—Varicose veins.
Philanthrops—Physiological cruelty.
Philosophers look to scientists.
Quinn & Jones—Carbon dioxide.
Riviere—Un demi-siecle de Physicotherapie.
Rycroft—Manual of ophthalmology for medical officers.
Sahyun—Outline of the amino acids and proteins.
Sedges—The Townsman (An American novel).
Sherman & Lanford—An introduction to foods and nutrition.
Stitt's—Diagnosis, prevention and treatment of tropical diseases.
Thienes—Pharmacology for students and practitioners.
Winton & Winton—Food analysis.

Tuberculosis and Syphilis

Are the two most important health problems of liberated Manila, according to information released by UNRRA. Based on returns for the first three months of liberation, the death rate for pulmonary tuberculosis as for a year has been calculated at 800 per 100,000 inhabitants, or about twenty times that of the average American city. In ten weeks, 2,045 new syphilis cases were found among the civilian population, and the incidence continues to increase. Gonorrhea is equally prevalent. Manila was one of the few cities of tropical Asia where malaria had been reduced to a low level. During the Japanese occupation the disease returned and it now constitutes a serious problem. There has been no significant increase of other epidemic diseases.

War-shattered cities in continental Europe are also suffering from serious epidemics. Pulmonary tuberculosis mortality has more than doubled in Rome. Epidemics of bacillary dysentery of a severe type and of typhoid fever are spreading in Berlin, where diphtheria, too, is once more on the increase. There were 1,100 cases of typhoid fever during the first three weeks of August. At Helsinki, Finland, there have been 2,472 paratyphoid fever cases up to September 6. Diphtheria remains widespread in the Netherlands where now one-half of the cases occur among adults.

XUM

OBSERVATIONS ON LOEFFLER'S SYNDROME—REPORT OF FOUR CASES

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Richmond, Virginia.

The purpose of this paper is to present the result of a study of a symptom complex which was first described by William Loeffler[1] in 1931. The European literature since that time contains many articles dealing with this syndrome. René Cohen[2] reported in 1936 that the condition was rare and then recorded a series of one hundred cases, of which Loeffler himself had seen fifty-one.

A review of the literature discloses a paucity of reports from this side of the water compared with those reported from European sources. It seems odd that American authors have seen so little of, or failed to report, a symptom complex which is apparently quite prevalent in Switzerland and the rest of Europe.

Loeffler, after his first report in 1931, again wrote on the subject in 1932, and at the reunion of the Swiss Medical Society at Zurick, in 1936, reported fifty-one cases, which were over half the number reported by all of the authors up to that time.

From Loeffler's description of the syndrome it is quite clear-cut, easily carried in mind, and should offer no particular difficulty in diagnosis. The benign clinical features (mainly cough), together with the extensive X-ray shadows and the blood eosinophilia, could hardly fail to attract the attention.

The X-ray shadows, which are described as pulmonary infiltrations, vary greatly, being regular or irregular, unilateral or bilateral, large or small.

The percentage of eosinophils in the blood stream is increased, but quite variable, ranging from 10 to 69, and seems to bear no relation to the amount of pulmonary infiltration. Loeffler first observed the condition while studying X-ray films of tubercular patients, and was of the opinion that tuberculosis was an etiological factor. He also mentioned the possibility of allergy as a cause. It is to be regretted that many European reports are not more detailed—only twenty-five per cent of the reports, according to R. Freund and S. Samuelson,[3] contain complete data, a statement verified by our review of their reports.

Reporting from Jerusalem, Palestine, the above authors present a thorough study of one case of Loeffler's syndrome and also tabulate all of the cases occurring in Europe up to 1940, totaling one hundred and five. From this record, it is obvious that, from 1936 to 1940, only five cases were added to the literature; while from 1931 to 1936 there were one hundred cases reported. This seems strange. It is also interesting to note from their tabulations that, of the one hundred and five cases reported, eighty-eight were divided among four men: Loeffler—51; Geiger—15; Wild—14; and Leitner—8. Twenty-seven were reported by eight other authors.

Bertil Soderling,[4] of Sweden, has recorded a case of a child with Loeffler's syndrome. He goes into the subject very fully and is inclined to believe that although Loeffler first described the condition in 1931, D. Engle,[5] of Shanghai, China, in 1935, made the most significant contribution to the literature in his description of "Privet Cough", an epidemic disease occurring in that country.

The above author describes an epidemic form of "Privet Cough". He was himself a victim of the disease. His blood count showed a marked eosinophilia, and X-ray films revealed massive lung infiltrations, the first of which cleared in one day and again in six days. In his opinion these cases of "Privet Cough" were in reality Loeffler's syndrome. He stated that the patients in his series complained of a metallic taste from the sputum. The epidemic occurred in May and June.

James H. Smith,[6] in 1943, reported a case of Loeffler's syndrome. His case occurred in the summer and had severe asthma. One outstanding feature was the high eosinophil count, on one occasion as high as 69 per cent. He emphasized the similarity of the X-ray findings to those in tuberculosis. F. Parks Weber,[7] of England, reported in 1938 a case of Loeffler's syndrome in a ten year old boy, which occurred in the summer and was associated with Ascaris lumbricoides. The lung infiltrations cleared with the riddance of the intestinal parasites.

A. A. Karan and Emanuel Singer[8] reported, in 1942, five cases of transitory pulmonary infiltrations mistaken for tuberculosis. These cases were sent to a tubercular sanitorium before they were diagnosed.

James F. Slowey,[9] in 1944, recorded a case of Loefflers syndrome associated with Trichina spi-

Read before Richmond Academy of Medicine, January, 1945.

XUM

ralis and gives a very full review of the subject with the main emphasis on trichiniasis as a cause.

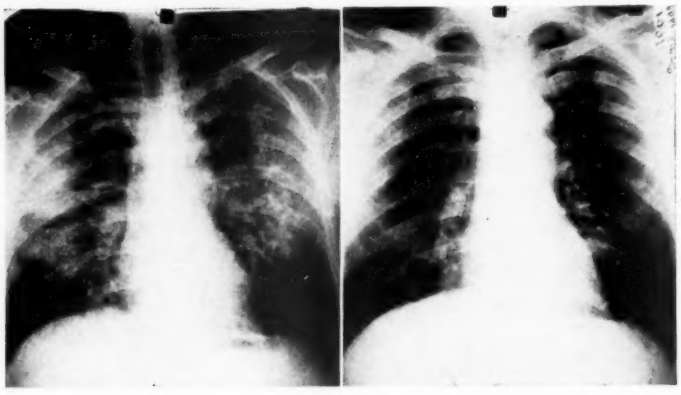
Amanda Hoff and Mason Hicks[10] report a typical case of Loeffler's syndrome associated with Entamoeba histolytica, which responded to emetine hydrochloride therapy—the lung infiltrations and eosinophilia yielding to the drug therapy. They give a very excellent review of the literature and show a most complete study of their case.

Pirkle and Davin[11] present a case of pulmonary infiltration with eosinophilia, the outstanding feature being the length of time required for the disappearance of the lung shadows. O. C. Hansen-Pruss and E. G. Goodman[12] report six cases which they wish to classify as "Allergic Pulmonary Consolidations".

Stewart H. Jones and Carlton R. Souders[13] reported one case of Loeffler's syndrome and show a thorough review of the literature on the subject. They also stated that in a recent army discharge of six thousand, five hundred men, chest X-rays were done, and eleven showed pulmonary infiltrations.

The only author who describes the pathology of the disease is H. Von Meyenberg,[14] who reports four autopsied cases. He considered it a benign disorder. Three of these cases died as the result of military accidents, the fourth of traumatic tetanus of short duration. The gross pathology reported consisted of dense, airless foci, the size of a plum and cherry, respectively. They were believed to be ordinary bronchopneumonic foci. Microscopically the study of the pulmonary tissue revealed a large number of eosinophils, while examination of other tissues revealed eosinophilia of the bone marrow and of the blood. Evidence is presented that there is not only a bronchogenic, but also a hematogenic involvement and that eosinophilic infiltrates occur, not only in the lungs but also in other organs. There is evidence of a possible relationship between epididymitis and pulmonary infiltration. His studies showed no evidence of bacteriologic infiltration. The author concludes that eosinophilic pulmonary infiltration is an inflammatory, allergic reaction to various allergens which may enter the body by various routes.

Kartagener[15] states that "the earlier assumption that edema or atelectasis is the underlying anatomic change in Loeffler's syndrome has been superseded by Von Meyenberg's investigation." The author maintains that these infiltrations represent eosinophilic pneumonia. Transient lung infiltrations with eosinophilic elevation should be designated as eosinophilic infiltration of type Loeffler. Kartagener describes a case which he thinks represents a third type of eosinophilic infiltration. This form is characterized by chronicity and mildness of symptoms.



1—a. X-ray of chest of Case I taken on December 28, 1943.

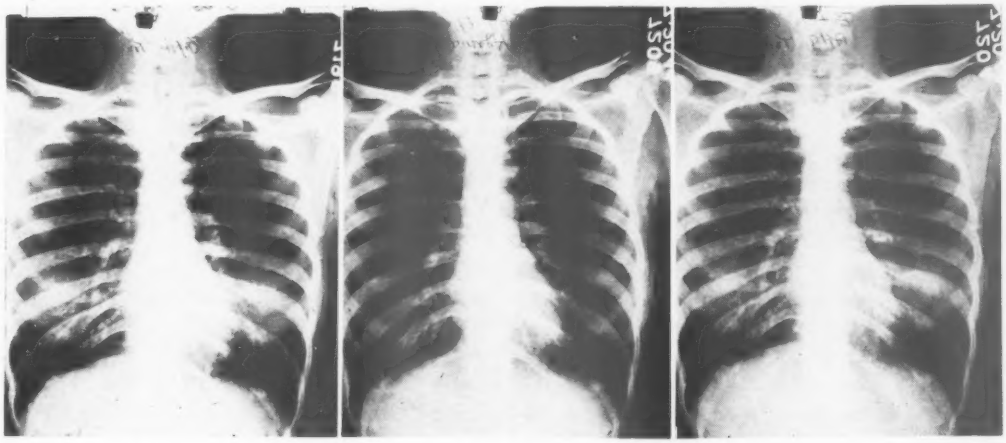
b. X-ray of chest of Case I taken three months later, March 28, 1944.

We wish to report four cases with X-ray films of each:

Case I.—A fifty-seven year old white male complained of cough and difficult breathing. He gave a history of asthma and hay fever and related that his mother was afflicted with the same disease. Five weeks before he had been seized with a chill, cough, and high temperature, which had necessitated his being in bed for four weeks. He feels quite well now except for weakness.

On physical examination there was marked dullness to percussion over both right and left chests posteriorly; there was bronchial breathing and an occasional moist rale. The remainder of the physical examination was negative. The laboratory data revealed: red cell count 5,050,000; hemoglobin concentration 100 per cent; white cell count 8,500; neutrophils filamented 56 per cent, non-filamented 6 per cent; eosinophils 2 per cent; lymphocytes 35 per cent; monocytes 2 per cent. Sedimentation rate (Cutler) 15 mm. in 1 hour, blood sugar 110 mgm. per 100 cc. of blood; N.P.N. 48 mgm. per 100 cc. of blood; Kolmer and Kline negative. Urinalysis negative. BMR 0; EKG normal. Gastric analysis showed a peak acidity of 58 units of free acid and 64 units of total acid. Tuberculin reaction negative. Sputum examined for tubercle bacilli negative (repeatedly). X-ray films of chest revealed an extensive involvement of both lungs. There was considerable consolidation, and all lobes were involved on both sides. Temperature 98.6; pulse 80; respiration 20; blood pressure 100/70.

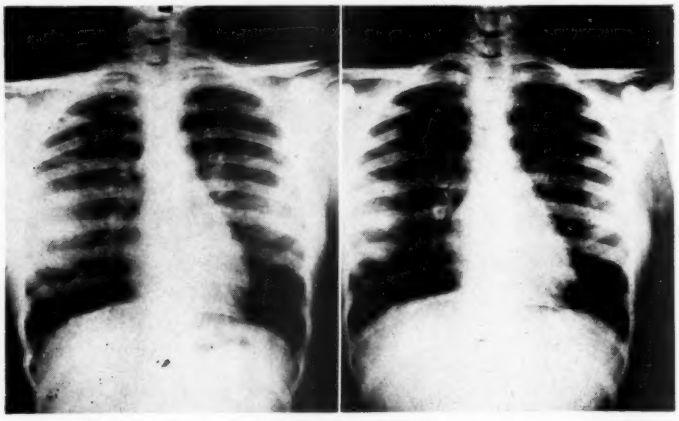
Case II.—A twenty-seven year old white female complained of persistent, non-productive cough and some pain in left chest of six weeks' duration. Her family history revealed that asthma was a complaint of her paternal grandmother as well as her father. Her physical examination was essentially negative, except for her chest, which showed many rales of all descriptions over both anterior and posterior, upper and lower chest. There was definite wheezing, typical of asthma. Laboratory examination of the blood yielded the following data: red cell count 4,650,000; hemoglobin concentration 93 per cent; white cell count 7,050; filamented 40 per cent; non-filamented 9 per cent; eosinophils 16 per cent; lymphocytes 35 per cent. Sedimentation rate (Cutler) 17 mm. in one hour; (Westergren), 30 mm. in one hour. Blood sugar, 100 mgm. NPN 32 mgm. Kolmer, Kline, and Kahn negative. The rest of the laboratory work showed a negative tuberculin reaction, sputum examination for tubercle bacillus negative (repeatedly), sputum examination positive for eosinophils, specimen aspirated from sinuses, positive for eosinophils. Urinalysis was negative. EKG normal, BMR minus 8. Gastric analysis showed a peak acidity of twelve units of free acid and twenty units of total acid. The stool examination failed to reveal any amoeba, ova, or parasites. Agglutination for virus infection was negative. X-ray films of antra showed some cloudiness over the left antrum. X-ray films of chest showed in the lower lobe of each lung a shadow which was regular and 3 cm. in diameter. Skin test for Trichina spiralis was negative. The usual allergic skin tests to inhalants were negative. Temperature was 98 degrees; pulse 80; respiration 18; blood pressure 110/70.



2—a. X-ray of chest of Case II taken before adrenalin. b. X-ray of chest of Case II taken 1 hour after injection of adrenalin. c. X-ray of chest of Case II taken 24 hours after injection of adrenalin.

Case III.—A sixteen year old white female complained of persistent non-productive cough and

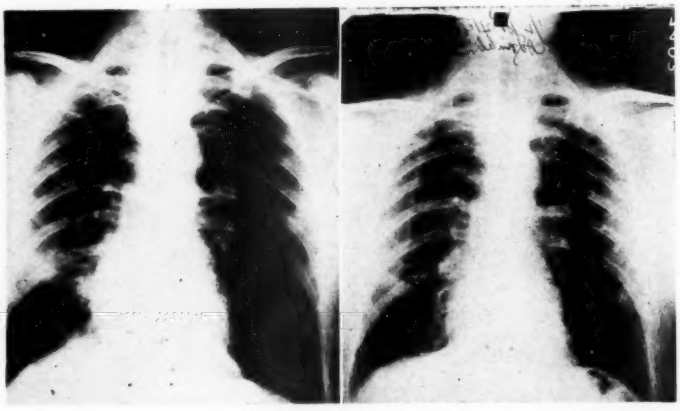
slight pain in left axillary area of chest of three days' duration. She had no other complaints. Her past history revealed asthma and hay fever. On physical examination she was normal except for a tuberculin reaction, sputum examination for tubercle bacillus negative, urinalysis negative. EKG was normal, BMR minus 5. Stool examination failed to reveal any amoeba, ova, or parasites. X-ray films



3—a. X-ray of chest of Case III taken before adrenalin. b. X-ray of Chest of Case III taken 1 hour after adrenalin.

few squeaky rales in the axillary region of the left chest. Laboratory examination of the blood yielded the following data: red cell count 4,360,000; hemoglobin concentration 86 per cent; and white cell count 8,800. Neutrophils filament 45 per cent, nonfilament 3 per cent, *eosinophils 16 per cent,* lymphocytes 36 per cent. Sedimentation rate (Cutler) 15 mm. in one hour, sugar 100 mgm., N.P.N. 32 mgm.; Kolmer, Kline, and Kahn were negative. The remainder of her laboratory data showed a negative of chest showed in each lung, about the mid portion, a shadow which was fairly regular in outline and 3 cm. in diameter. Temperature 98 degrees; pulse 74; respiration 18; blood pressure 100/70.

Case IV.—A white male, forty-eight years of age,



4—a. X-ray of chest of Case IV before adrenalin injection. (Lower right side.) b. X-ray of chest of Case IV 1 hour after adrenalin. (Lower right side.)

complained of cough and wheezing. He had been a victim of bronchial asthma for four years. After an acute siege of coughing and dyspnea, associated with low grade fever, his chest was X-rayed, and

there was found in the middle lobe of the right lung an area of infiltration. Further laboratory data revealed a red blood cell count of 5,010,000; a hemoglobin content of 100 per cent, white blood cells 10,600, with 54 per cent filamented cells and 7 per cent non-filamented, eosinophils 9 per cent, lymphocytes 30 per cent, blood sugar 60 mgms., N.P.N. 30 mgs., sedimentation rate 12 mm. in 60 minutes. Kline, Kolmer, and Kahn negative; tuberculin test 2 plus; BMR minus 13, EKG normal, urinalysis negative.

On the assumption that we were dealing with an allergic reaction in the lungs (Loeffler's syndrome), and that in all probability it was due to localized edema, simulating angio-neurotic edema, which in turn is believed to be due to hyperpermeability of the capillaries, the effec of a sympatheticomimetic amine was tried.

After the original X-ray, which showed increased density in both lower lobes resembling infiltration, the chest was X-rayed on the following day, and the same shadows were present. 0.5 cc. of adrenalin (epinephrine) was injected subcutaneously; after one hour the lungs were X-rayed. This film showed a complete disappearance of the shadows previously seen in the lower lobes of both lungs. The next day the chest was X-rayed again, and the original shadows had returned to the same locality as previously noted. *This would appear to be evidence that the assumption stated above was correct, and it is presented as an original observation that has not been reported in the literature before.* (Figures 2, 3, 4).

An attempt was made to reproduce the same results with a subsequent injection of adrenalin, but the shadows did not clear. A possible explanation of this failure can be attributed to the fact that the patient was taking daily an ephedrine product for relief of the aggravating symptom of cough. It is possible that she had become "adrenalin fast", and this may explain our failure.

In a review of the literature of Loeffler's syndrome we fail to find reference to an observation made on X-ray films before and after the administration of epinephrine and the disappearance of the pulmonary shadows. However, we find in Reimann's *The Pneumonias* this statement: "It is assumed that pulmonary tissue may become sensitized in the same manner as the nasal mucosa becomes sensitized, and that contact with a specific allergen may result in a sudden infiltration of the lung with signs resembling pneumonia. There is some clinical, as well as experimental confirmation of this idea. Such a diagnosis rests on X-ray evidence of an afebrile pulmonary infiltration in an allergic individual (especially in the asthmatic) with a normal white count except perhaps for eosinophilia, which rapidly subsides after the injection of adrenalin."

In Osler's *Principles and Practice of Medicine*[22]—1915, we find a description of angio-neurotic edema (Quincke's disease) with this definition: "An affection characterized by the occurrence of local edematous swellings more or less limited in extent, and of transient duration." In Osler we do not find evidence of chest X-rays and blood counts in this interesting disease, but had they been done we might have found pulmonary infiltration and eosinophilia.

Edema of the larynx is the most dangerous of all types of Quincke's disease, and this leads us to believe the edema might have a predilection for the respiratory tract as well as the skin. The preponderance of evidence is in favor of allergy as the etiological factor.

Loeffler's attention was first attracted to the symptom complex while studying roentgenological films of tuberculosis; he also mentioned an allergic basis but did not stress it. Later studies, some of which are mentioned in the reference, bring out more prominently the allergic basis of the condition. Asthma is frequently a precursor. Blood eosinophilia and the benign clinical symptoms as compared with the malignant X-ray films create a bizarre picture which is as fascinating clinically as it is interesting academically. Some authors have presented cases of Loeffler's syndrome associated with parasitic intestinal infestations, and these we consider true to the definition of the syndrome. Others, however, have included pulmonary infiltrations of all descriptions, with fever, the patient being apparently quite ill, leucocytosis up to 66,000, WBC, and with prolonged or delayed clearing of the lung—three to eight months—indicated by X-ray films. The nomenclature of this heterogeneous group of lung infiltrations includes pneumonitis, virus pneumonia, eosinophilic pneumonia, virus pneumonitis and a host of other terms which really mean lung infiltrations of unknown origin. This group cannot be considered as having the same etiological basis as Loeffler's syndrome, and we disagree with the inclusion of them in this syndrome.

XUM

The pathological involvement in Loeffler's syndrome has not been extensively observed, as the subjects do not come to autopsy, unless they die suddenly from some accidental cause, as in H. Von Meyenberg's cases. However, it is possible by other means than autopsy to investigate pathological changes—edema of the lips in urticaria, a pathological condition, can be relieved by the injection of epinephrine. The mechanism involved here is the result of a sympatheticomimetic agent and indicates that the pathology is the escape of fluid from the capillaries due to so-called hyperpermeability of these organs. Other types of Loeffler's syndrome may be caused by bacterial allergens, and in these cases there may be marked eosinophilic infiltration; this type of lung infiltration cannot be relieved by a sympatheticomimetic agent. In Loeffler's syndrome which is associated with intestinal parasites or Trichina spiralis, it is probable that the above parasites act as allergens, and when the offending agents are destroyed, the lung infiltrations clear.

Eosinophilia is usually present in most allergic conditions and is considered as an essential part of Loeffler's syndrome. However, although its presence is certainly an anchor sheet in the syndrome, it is possible that it may be absent, as it is in other allergic conditions at times.

The familial aspect of this syndrome has not been stressed in any of the literature we have reviewed, and we would like to emphasize it here. In our first case, the father of the girl in Case II, experienced a pulmonary infection on December 1, 1943, which was diagnosed as virus pneumonitis. After a four weeks' illness, which included high fever (103°-104°), cough, hemoptysis, pain in chest, moderate leucocytosis, the patient began to improve clinically. On December 28, 1943, the patient's chest was X-rayed. The roentgenologist made a diagnosis of advanced tuberculosis. At this time the patient was improving clinically, gaining weight, having a normal temperature and feeling better every day. A week later, the chest was X-rayed again. At this time the roentgenologist considered carcinoma of the lung as a possibility, but could not be sure. Two weeks later the chest was re-X-rayed. The same shadows were present, and the roentgenologist was undecided as to the diagnosis. The patient at this time was steadily improving clinically, gaining weight and feeling fine, while the X-ray man believed the patient had serious lung pathology. After three months and a gain of 25 pounds in weight, the patient's chest was X-rayed and was clear except for a few increased bronchial markings. We conclude that these two cases, father and daughter, have an allergic history, with asthma as a precursor and a tendency to pulmonary infiltration. In addition to the clinical interest that this symptom complex presents, we can also see the possibility of diagnostic errors, such as confusion with tuberculosis, which can create embarrassing situations as occurred in the five cases of A. A. Karan and Emanuel Singer.[8]

We wish to point out certain features which have not been too well emphasized, namely, the probability of a familial characteristic, the metallic taste of the sputum, the frequency of asthma as a precursor, and the fact that the pulmonary shadows can be made to disappear temporarily by the injection of adrenalin (ephinephrine).

We are of the opinion, and it is shared by many others, that the etiology lies in some allergic reaction. The precise allergen may be difficult to isolate, as it is in asthma, and there may be many different causes. We cannot agree with the idea of tuberculosis as an etiological agent. We are of the opinion that intestinal parasites act as allergens which are etiological agents.

X-ray findings are quite variable. In our cases they were bilateral and unilateral, regular in outline and in the lower and middle lobes. In others the shadows may be more massive, irregular, shifting from one lobe to another and from one lung to the other. The similarity to tuberculosis is confusing to the roentgenologist unless he is familiar with the laboratory findings and the clinical features. For this reason it is important to share with the roentgenologist our clinical knowledge. No diagnosis should be made on a single X-ray plate; repeated X-rays are important, and serial copy X-rays are frequently necessary.

Eosinophilia is little understood. The cells are of myeloid origin and appear often in large quantities, as well as in many conditions, such as asthma, hayfever, chronic skin diseases (eczema), parasitic intestinal infestations, myelogenous leukemia, as also in Loeffler's syndrome. They are seldom concentrated around an area of infection as they are not phagocytic, but they are a prominent feature in the pathological picture of allergy, being increased in

XUM

the blood stream, as well as in the tissues and bone marrow.

SUMMARY

The literature of pulmonary infiltrations (Loeffler's syndrome) has been reviewed.

Four cases of Loeffler's syndrome have been reported.

The effect of epinephrine in three cases has been noted.

The etiology and pathology have been discussed.

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Physician-Artists' Prize Contest.

The American Physicians Art Association, with the cooperation of Mead Johnson & Company, is offering an important series of War (Savings) Bonds as prizes to physicians in the armed services and also physicians in civilian practice for their best artistic works depicting the medical profession's "skill and courage and devotion beyond the call of duty".

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XUM

REPORT OF FIVE CASES OF MENINGITIS TREATED EMPIRICALLY WITH SULFANILAMIDE UNDER RURAL AND LOW ECONOMIC CONDITIONS

CHALLIS H. DAWSON, M.D.,
Suffolk, Virginia,
and
HUBERT D. CROW, M.D.,
Courtland, Virginia.

We all know of the strain placed upon physicians during the past two years; we know that diagnostic procedures have been greatly curtailed, not by choice, but from lack of sufficient time. We all know, too, that this could become a regrettable habit, which we should guard against at all times. "During the epidemic of influenza" in the winter 1943-1944, rarely was a case of influenza seen by me a second time. There was always a new case of pressing importance.

Total cases of meningitis reported to Suffolk from Southampton, Isle of Wight and Nansemond Counties from January, 1943, to April, 1944:

Colored ---------- 12
White ---------- 6
Colored, male, age 16, (suspect) ------ 1

Of the colored cases there were
Six males, ages 12, 17, 9, 2, 2, and 20 months.
Six females, ages 10, 10, 30, 18, 14 and 11 months.
Of the white cases there were
Five males, ages 4 months, 54, 26, 14, 11.
One female, age 30.
Five of these were reported by hospitals.

We know of at least 6 deaths reported and there were perhaps others. Unfortunately, the morbidity and mortality reports are incomplete.

The first of the five (5) cases to be reported was begun on sulfanilamide therapy at the time of original examination. Because of the excellent results in this case it was employed in subsequent cases. In spite of this small series it was considered worth reporting to the profession because of the prompt recovery in each case with the absence of any untoward reactions and a total lack of sequelae. An extremely minimum amount of study is frankly admitted and this one item alone may be the most important one to the general practitioner in small rural areas not blessed with hospital and laboratory facilities.

In a reply to Dr. Crow, dated March 23, 1944, Dr. H. B. Haag, Professor of Pharmacology, Medical College of Virginia, states: "In regard to the question as to the difference in concentration in the spinal fluid level of the various sulfonamide drugs, it appears that, with the exception of sulfathiazole, they all pass readily into the cerebrospinal fluid, reaching concentrations averaging 40 to 65 per cent of that present in the blood. Sulfathiazole reaches a concentration of only about 20 per cent of that found in the blood. Nevertheless, apparently because sulfathiazole is not so easily bound by the proteins of the cerebrospinal fluid, it has proven quite effective in the treatment of certain types of meningitis. However, sulfadiazine is the drug of choice at the Medical College of Virginia.

"Here at the college we use sulfadiazine for the treatment of meningitis, except those due to staphylococcus, when sulfathiazole is used. As a general procedure we do the following:

"Sixty grains are given by vein followed in 6 hours by 30 grains intravenously. Beginning 6 hours after this the patient is given 15 grains orally every 4 hours. Only one spinal puncture is made, and that to determine the type of organism involved. We make sure that the patients secrete 1,500 cc. urine daily. Blood counts are started on the fifth day of therapy. In patients with kidney disease or in patients sensitive to sulfadiazine we use sulfanilamide.

"In a recent circular letter issued by the Surgeon General of the U. S. Army sulfadiazine is recommended as the drug of choice in the treatment of meningococcic meningitis with sulfanilamide as the drug of second choice."

I want to take up briefly here the differentiation between a meningismus and meningitis. I believe that every infant and child up to 2 and 3 years of age will show a cervical rigidity when acutely and

*Read before the Medical Society of Virginia at its annual meeting in Richmond, October 23-25, 1944.
Purpose of This Report: Possible value to physicians seeing cases in rural areas who do not have laboratory facilities and where spinal punctures either are impractical or impossible.

severely ill with an infectious disease. I believe this to be nearly 100 per cent true. Thirty-two years ago, two of my professors in medicine, Dr. Frank Winders, a good teacher and certainly very popular, and Dr. John H. J. Upham, whom you all know, and who became the Dean of the College of Medicine, Ohio State University and later president of the A.M.A., taught a simple method of differentiating between a false and a true cervical rigidity. Although simple, it requires a certain amount of gentleness, tact, and patience. By pressing gently but firmly the thorax on the examining table, then slowly lifting the head, giving the muscles time to relax, the chin may be brought against the upper sternum in meningismus. Never can this be done in any kind of meningitis. It may take as much as 30 minutes or more, however, to bring about the necessary relaxation of the muscles involved. This sign will be evident before any others and is sufficient on which to begin treatment. I hope Dr. Birdsong will give you a more detailed and scientific discussion on the diagnosis of meningitis than I can.

Case 1: H. L., c., m., 10 mos., Nansemond County. This patient was seen one time only in my office on May 3, 1942. History of sudden onset with convulsions, followed by high fever and vomiting, restless, later becoming stuporous. Physical findings were as follows: well developed, colored male infant, acutely ill, semi-comatose, rectal temp. 104°, marked cervical rigidity and rapid pulse; otherwise essentially negative. There was no history of preceding illness and no history or evidence of trauma. Throat and ears unremarkable—no trismus. No pathology detected in the lungs and heart, being negative except for rapidity. Abdomen negative. No paralysis of extremities, and no skin lesions seen. Spinal puncture was not done. Diagnosis: Meningitis, type undetermined. Therapy was begun immediately, using sulfanilamide, initial dose 10 grs., followed by 5 grs. q. 4 hrs. for 36 hours. No special reaction to the drug was noted and patient was symptom free three days later.

Case 2: Baby C., white, female, age 2 years. Patient brought to my office April 23, 1943, with history of slight upper respiratiory infection for 2 or 3 days preceding. On original examination a definite diagnosis could not be made but meningitis was suspected in view of rather sudden onset, vomiting, temperature and slight stiffness of neck. Next day, April 24, there were definite signs of meningeal involvement. Baby appeared acutely ill, temperature 103°. Child restless, irritable, at times stuporous. There was marked rigidity of the neck, slight opisthotonus, positive Kernig and Brudzinski signs. No history of preceding injury, no evidence of otitis media. No chest pathology detected. No paralysis or weakness of extremities. Diagnosis: Meningitis, undifferentiated. Treatment was begun, using sulfanilamide, initial dose grs. 10, followed by 5 grs. q. 4 hrs. Patient appeared to be completely recovered 72 hrs. after beginning therapy.

Case 3: J. L., c., m., 8 yrs., suburbs of Suffolk. There was a history in this case of sudden onset, with high fever and irritability, followed rapidly by drowsiness. The child was seen by me December 18, 1943, which was one day after onset. At this time the following was noted: Well developed, c., m., child lying in bed on his side with head drawn back, back arched and knees flexed. Deep coma existed. There was extreme cervical rigidity, retraction of the head, stiffness of the back, positive Kernig's sign and Brudzinski also positive. Diagnosis: Meningitis. Sulfanilamide therapy was begun immediately in the same dosage as that in the previous two cases. Two days later, December 20, definite signs of acute meningeal involvement were still present but deep coma had disappeared and child was fairly rational. There was very marked retraction of the head and great stiffness of the neck and back, and opisthotonus was marked. Temperature, which had been high—104°—dropped to 101° by December 22. There was considerable daily improvement in general appearance and a rapid decline in temp., the latter reaching normal by December 24. Signs of meningitis gradually disappeared until the child was symptom free, about one week from date of the first visit. In this instance the family was known to be syphilitic, but serology test in the case of patient was negative.

Case 4: L.M., c., m., 22 mos. old. In this case there was a history of vague prodromal symptoms of about one week's duration, followed by sudden onset, with temperature, vomiting and anorexia. On examination, the patient was seen to be quite ill, and apparently suffered pain on handling, especially on movement of head and neck. There was definite rigidity of the neck. No evidence of otitis media was found, but there was congestion in the

XUM

base of the left lung with temperature 103°. No paralysis was noted. Diagnosis: Meningitis. The same therapy was begun on this child as that used in the above reported cases. The child was first seen on January 4, 1944, and again on January 6 and 10. On January 6, the child was definitely improved; temperature had fallen to 100°, and all signs and symptoms of meningitis had disappeared by January 10.

Case 5: H. J., w., m., 9 yrs. old. I was called to see this patient on January 21, 1944, the day of onset of acute illness. This patient was known to be physically and mentally subnormal and is said not to have been a well child all his life. However, there was nothing definite except poor appetite, emaciation and inability to do well at school. History obtained from the mother revealed that the child had been sick about Christmas time with what may have been a mild case of influenza. No physician was in attendance at that time. For five days —from the 14th to 19th of January—the child seemed more lethargic than usual but continued in school. He became acutely ill January 21, and when seen by me was extremely agitated, maniacal and it was difficult to restrain him. This boy was poorly developed and poorly nourished, exceedingly restless, irritable, irrational, and semi-comatose. He had complained of severe headache from onset of illness. Temperature 103½°, rigid neck, with slight retraction of the head, Kernig positive, Brudzinski positive. There was hypersensitivity of the skin, but no skin lesions were seen. There was no paralysis of extremities. Diagnosis: Meningitis. At first, poliomyelitis was considered as a possibility but was ruled out. Agglutination test and blood culture were negative. Sulfanilamide was begun January 21, with an initial dose of 10 grs., followed by 5 grs. q. 4 hrs. Also codeine grs. ¼ as needed were given to relieve headache and irritability. Response was rapid and on second day, January 22, the child had become much less irritable and restless and, unless handled, lay quietly in lateral position with head slightly retracted, back slightly arched, knees flexed. He was still not completely rational, although he continued to complain of headaches, and he would respond occasionally to simple questions. Skin was still hypersensitive to touch. Neck rigidity was still pronounced but temperature had fallen to 101°. By the third day, January 23, there had been so much improvement that the dosage of both sulfanilamide and codeine were reduced to a minimum—sulfanilamide grs. 5 t.i.d. Boy promptly relapsed and was given combination of sulfanilamide and sulfathiazole, ½ gm. of each q. 4 hrs. He again responded and continued to show steady improvement, although gradual, with some cervical rigidity continuing for about ten days. On February 6, he developed an unexplained severe pain in the left hip. Associated with this was limitation of motion in all directions except with excrutiating pain, and rise in temperature. This condition lasted less than 24 hours and no explanation for it was determined. Sulfadiazine was substituted for the sulfanilamide—sulfathiazole mixture on February 6. The child progressively improved and was discharged February 14, as cured. Examination April 16 revealed no sequelae of this boy's recent illness and he appeared to be in better health than usual, having gained 20 pounds.

CONCLUSIONS

1. As soon as diagnosis of meningitis was made, prompt treatment was considered preferable to waiting confirmation of type. Time lost in hospitalization may mean a case lost.

2. Early treatment is most important item. If improvement is not apparent in 24 to 36 hours, change to another sulfonamide, preferably sulfadiazine.

3. There was prompt response to sulfanilamide therapy with no untoward reaction.

4. Dosage of sulfanilamide was somewhat heavier than generally recommended.

Drugs employed:

1. Neosulfanil Tabs. āā gr. V with Sodium Bicarbonate.
2. Codeine, Tabs. Hosacode, Haskell, mild.

5. I believe there has been too much emphasis on the danger of the use of these drugs, thus producing an unwarranted timidity in their use by physicians. We all know of the so-called dangers, but, personally, I have seen nothing but mild reactions—many mild nauseas and some slight eruptions, but nothing serious.

6. All cases were seen by Drs. H. D. Crow and B. R. Allen, Health Officers having jurisdiction. Diagnosis confirmed by them and meningismus was ruled out. Especial acknowledgment is made to Dr.

Crow who aided very materially in the preparation of this report.

137 Bank Street.

DISCUSSION

DR. MCLEMORE BIRDSONG, University: I find myself unable to agree with Dr. Dawson in the diagnosis and treatment of meningitis without at least a diagnostic lumbar puncture. It is impossible for me to say from this report that these reported cases are meningitis. They could be mild encephalitis, abortive poliomyelitis, meningismus, meningitis, or, of course, other acute disease. If they are meningitis, they must have been meningococcus, for, otherwise, there is very little chance that any of the patients would have recovered.

The diagnosis of meningitis is usually made on the following points: A history of fever, vomiting and drowsiness, coma or convulsions. The physical signs vary quite a lot in different age groups. In small children one of the earliest and most important signs is the bulging of the fontanel. Other signs are stiff neck, positive Brudzinski and a positive Kernig sign. Unfortunately, these signs appear in numerous other diseases in infants and children, and occasionally we have meningitis without the above symptoms and signs. The third and final method of making a diagnosis is the lumbar puncture, and there is no reliable method of making a diagnosis of meningitis unless a lumbar puncture is performed. This will not only rule out meningitis if it is not present, but by proper study of the spinal fluid will give information absolutely necessary for proper treatment.

Several years ago before the advent of specific therapy, the differential diagnosis as to the type of meningitis was not as important from a therapeutic standpoint as it has become under our vastly improved method of specific therapy. The mortality of all types of meningitis except meningococcus meningitis was exceedingly high, and even in meningococcus meningitis the results were not too pleasing. Today, the agents we have for the treatment of the various types of meningitis have completely changed our outlook on this disease. In the meningitis sulfadiazine is definitely the drug of choice; in influenzal meningitis, a combination of specific anti-influenzal rabbit serum with sulfadiazine. Recently we have used penicillin in the treatment of pneumococcus meningitis, and certainly this seems superior to all previous methods. This is also true in staphylococcus meningitis. In streptococcus meningitis sulfadiazine plus blood transfusions appear most helpful.

Because of the difficulty in obtaining sufficient information in the home, I feel that meningitis is a disease that deserves hospitalization, as much so as conditions such as appendicitis and bleeding peptic ulcers.

There is no place in Virginia that a patient cannot get hospitalization within several hours, and I do not believe that time lost in hospitalization is of as great danger as the blind treatment which must be rendered in the home without adequate facilities for diagnosis and treatment.

I wish to show two slides which show the difference in the mortality rate before the use of specific therapy and under the somewhat changing status between 1937 and the early part of 1944. (Slides were shown.)

DR. H. O. BELL, Belleville, New Jersey: We have a hospital which covers the whole of Essex County, in New Jersey, and we had 170 cases of epidemic meningitis admitted in 1943, with nineteen deaths. We treated practicaly all of them with sulfadiazine, but we had to give it as sodium sulfadiazine intravenously if they could not swallow. As Dr. Birdsong says, I do not see how you can possibly make a diagnosis without lumbar puncture.

I think it is extremely important to get adequate fluid into these patients.

As to the Waterhouse Friderichsen syndrome he spoke of, we had five cases. I have never seen a case with true Waterhouse Friderichsen syndrome live, because I do not think the diagnosis can be made definitely until the patient is dead.

In the influenza cases you have to treat them with Alexander serum, and I do not think you can adequately treat those in the home.

DR. DAWSON, closing the discussion: I have nothing more to add but want to thank Dr. Birdsong and Dr. Bell for their discussions.

Of course, we all know that accurate differential diagnosis, as to type, cannot be made without a spinal puncture. I want only to call attention to the fact that sometimes it is impossible to get a spinal puncture.

I may question Dr. Birdsong's statement that there are no places in Virginia where hospitalization is impossible. There are places right in my home county.

With the triad of excruciating headache, cervical rigidity, and temperature present, it is imperative to do something at once. I would suggest the following procedure when meningitis is suspected:

1. Give sulfonamides immediately, large dosage, first 24 or 48 hours.
2. Type at once, remembering that the next 24 hours may be the crucial ones.
3. Hospitalize if facilities are available.

Give any sulfonamide available at the moment. Sulfadiazine is the one of choice, although I have found sulfanilamide with soda seemingly effective and perhaps slightly more convenient of administration in infants and young children. It is barely possible that the final chapter on the sulfonamides has not been written.

Recent evidence indicates that not only is one spinal tap sufficient but great harm may be done the patient by repeated taps—(Dr. Hobart A. Reimann, Professor of Medicine, Jefferson Medical College).

XUM

SPLENOMEGALY WITH HEMOLYTIC JAUNDICE AND BILATERAL LEG ULCERS.

ANTONIO GENTILE, M.D.,*
Newport News, Virginia.

The following report is on a case of splenomegaly treated by splenectomy. The patient, a white male, aged 47 years, was first seen on April 10, 1938, at which time he was admitted to the hospital complaining of large ulcers on both legs. The patient stated that for the past seven years he had had these ulcers but it was only during the last six months that they had become troublesome and painful to the extent that he could not work during ths last two months. Swelling of both feet and ankles was present during this period of time.

PAST HISTORY: Essentially negative.

FAMILY HISTORY: Essentially negative.

PHYSICAL EXAMINATION: Revealed a thin, pale white male who appeared to be several years older than his stated age. Temperature was 100, respirations 20. The face and hands were pale and yellowish in color. The sclera was slightly yellowish. The teeth were dirty and carious. Chest, lungs, heart and abdomen were essentially negative. Extremities: Over the anterior and medio lateral surfaces of both legs from the knees down, there was a denuded, coated-like area with granulated tissue and a foul, discharge, probably due to a mixed infection.

LABORATORY FINDINGS: WBC 8,200; 83 per cent polys, 15 per cent lymphs, 1 per cent eos., and 1 per cent myelocytes; RBC 2,200,000; hemoglobin 40 per cent; urinalysis was negative, icterus index was 13 and Wassermann was negative.

The patient remained in the hospital for one week during which time he received two transfusions of 600 cc. of whole citrated blood. The patient's temperature varied from 98 to 102 and the pulse from 80 to 90. Unna paste boots were applied to the ulcers of the legs. Ventriculin, liver extract capsules and multiple vitamin capsules were also given. He was discharged improved, the ulcers of the legs being almost healed.

DIAGNOSIS: Atrophic ulcers of the legs, bilateral.
Dental Caries.
Pyorrhea.
Secondary anemia.

One week later, the patient returned to the hospital and was given another transfusion. From April 28, 1938, to May 13, 1939, he made weekly visits to the hospital to have the Unna paste boots

No. 1.—Patient, the liver and spleen outlined. Note bilateral leg ulcers. May 1939.

re-applied to his legs. The boots had a remarkable healing effect. On March 22, 1939, he was readmitted to the hospital with a complaint of weakness and dyspnea of one week's duration, during which time he remained in bed with arthrophyma of both feet and ankles. The patient had a cough with expectoration, there was nausea and vomiting with

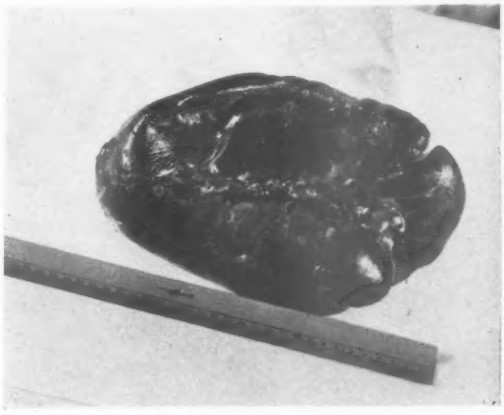
*Although this Case Report was actually written by Dr. Antonio Gentile prior to his recent death, it was edited by Dr. Ricado Diago, of the Elizabeth Buxton Hospital, at the request of a Committee of the Staff of that Hospital, and the paper is sent to the MONTHLY by Dr. Russell Buxton with a request that it be published.

a generalized jaundice of the skin and sclera and he was in extreme respiratory distress. There was a white discharge on the eyelids. The nose was obstructed on both sides, the teeth were dirty and carious, some were missing and there was pyorrhea. The mouth was dry, the tongue coated and the breath had a uremic odor. Auscultation of the heart revealed a systolic murmur at the apex and this was heard over the entire precordial area. The lungs revealed a slight dullness and moist rales in both bases posteriorly. The spleen was huge. The kidneys were not palpable. There was generalized tenderness in both upper quadrants of the abdomen. Blood pressure 138/60. There was slight edema of the scrotum. The legs appeared to be much better, but there was still a foul malodorous discharge.

No. 2.—Patient in a sitting position. May 1939.

The feet and the ankles were edematous. Temperature was 98, pulse 88, and respirations 24.

LABORATORY FINDINGS: RBC 1,480,000; hemoglobin 27 per cent; WBC 5,500, 64 per cent polys, 35 per cent lymphs, 1 per cent eos. and rare normoblast. Urinalysis was negative. The patient was digitalized and was given ammonium nitrate and 3 blood transfusions after which RBC increased to



No. 3.—Spleen following removal.

2,500,000 and hemoglobin to 45 per cent. Dyspnea was immediately relieved after the first blood transfusion. The patient was discharged a week later after Unna paste boots were applied to his legs.

FINAL DIAGNOSIS: Atrophic ulcers of both legs.
Carious teeth.
Pyorrhea.
Dilatation of the heart.
Congestion of bases both lungs.
Jaundice.
Splenomegalia.
Secondary anemia.

Unna paste boots were applied weekly until May 13, 1939, on which date he was re-admitted to the hospital. He stated he had gotten along well since his last discharge and had been able to resume his work and, although he was still jaundiced, he was in no discomfort. The heart was enlarged to the left with a loud systolic murmur at the apex which was transmitted over the entire precordial area. Blood pressure was 150/80. The spleen was more enlarged. Leg ulcers were improved.

LABORATORY FINDINGS: RBC 2,700,000; hemoglobin 50 per cent; WBC 5,400, 62 per cent polys, 30 per cent lymphs, 6 per cent monocytes, 2 per cent eos. Urinalysis showed traces of albumin. Wassermann was negative. Blood platelet count 378,000. Bleeding time was 4 minutes, 30 seconds. Venous

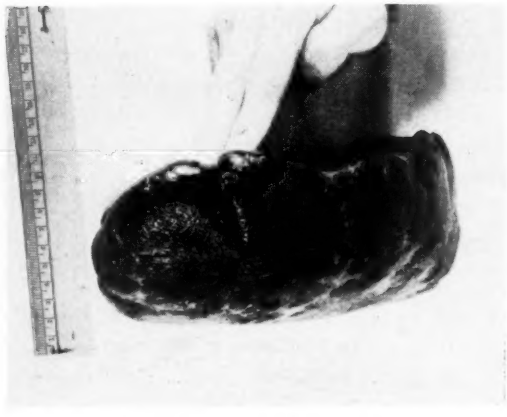
XUM

coagulation time was 5 minutes, 45 seconds. Capillary coagulation time was 3 minutes, 30 seconds. Icterus index 16, reticulocytes, 20½ per cent. Fragility test showed hemolysis beginning at 0.5 per cent, complete at 0.42 per cent; control hemolysis beginning

No. 4.—Spleen.

at 0.42 per cent, complete at 0.32 per cent. A diagnosis of hemolytic jaundice and splenomegaly was made and a splenectomy was decided upon. The day of operation, another large transfusion was given before the patient was taken to surgery.

Under ethylene and ether anesthesia, the abdomen was cleansed with alcohol, ether and tincture of mer-



No. 5.—Spleen.

thiolate. The abdomen was entered through a left pararectus incision extending from the lower border of the tenth rib down to and below the umbilicus, 18 cm. in length. The left rectus was retracted medialward. The peritoneum was incised and the abdominal cavity entered when an enlarged slate colored spleen presented through the incision. The stomach and the transverse colon were packed off with abdominal packs. The gastrosplenic ligament was incised, ligating the vasa brevia and exposing the lesser omental space. The lienophrenic ligament was ligated and divided. This was rather difficult in view of the numerous adhesions between the spleen and the left crus of the diaphragm. The spleen was rotated medialwards and upwards, delivering it through the wound. The tail of the pancreas was dissected from its attachment to the spleen and all bleeding points ligated. The lienocolic ligament was ligated and divided. The splenic artery and vein were then in clear view. These were transfixed and

No. 6.—Spleen.

separately ligated in triple with linen thread. The hilus was clamped and the vessels divided. The lesser sac was closed off, using No. 1 chromic catgut to approximate the peritoneal flaps. Hot wet packs were used to stop the oozing in the region of the diaphragm. The abdomen was closed in layers, using No. 1 chromic catgut for the peritoneum and the fascia. Three silkworm sutures were used and the skin was approximated with Michel clips. Five minims of adrenalin were administered just before the splenic pedicle was ligated. There was a visible constriction of the entire organ. The patient stood the procedure unusually well, though an intravenous infusion of 5 per cent D.R.L. solution was started

in the middle of the operation to safeguard against any shock. The total amount of blood lost was estimated at 50 cc.

The liver which was markedly enlarged, was rather soft and homogenous in color, being a reddish brown and having sharply defined edges. No marked evidence of hepatitis could be observed. A moderate amount of bile tinged fluid was observed in the abdominal cavity when the peritoneum was opened.

Measurements of the spleen:

Length: 27.5 cm.
Width: At hilus 17.5 cm.
Breadth: Upper pole 10.25 cm.
Lower pole 8.5 cm.
Weight: With blood 76 ozs.
Without blood 68 ozs.

Immediately prior to operation, RBC were 2,300,000 and hemoglobin 48 per cent. Immediately following operation, RBC were 3,300,000 and hemoglobin 68 per cent.

On the first post-operative day, the RBC was increased to 4,490,000 and hemoglobin to 88 per cent; WBC 18,400, 92 per cent polys, 3 per cent lymphs, 4 per cent monocytes and 1 per cent eos. and a few normoblasts. Platelet count was 263,000. Urinalysis showed traces of albumin, one plus blood and one plus pus.

On the third post-operative day, RBC were 4,480,000 and hemoglobin was 85 per cent; WBC 16,600, 84 per cent polys, 9 per cent lymphs, 6 per cent monocytes, platelets, 380,000.

On the sixth post-operative day, RBC 4,220,000, 83 per cent hemoglobin, WBC 11,900, 75 per cent polys, 21 per cent lymphs, 4 per cent monocytes and platelets 580,000.

On the thirteenth post-operative day RBC were 4,440,000, hemoglobin 84 per cent, WBC 7,400, 72 per cent polys, 27 per cent lymphs and 1 per cent eos. Icterus index was 5. The patient was discharged improved. The heart was reduced to almost its normal size. The lungs were clear and there were no rales. The spleen had been removed, and a few teeth had been removed. The RBC and the hemoglobin were normal. Bilateral leg ulcers were still present but were improved.

On July 29, 1939, two months following discharge, the patient's RBC count was 4,580,000, hemoglobin 90 per cent; WBC 17,200, 63 per cent polys, 29 per cent lymphs, 4 per cent monocytes, 1 per cent eos. and 1 per cent baso. Platelet count was 368,000. The leg ulcers were completely healed and the patient apparently cured.

CONCLUSION: A case of hemolytic jaundice with a tremendously enlarged spleen and bilateral leg ulcers is reported.

Floral Eponym (32)

GILLENIA

GILLE, A. FL. 17TH CENTURY

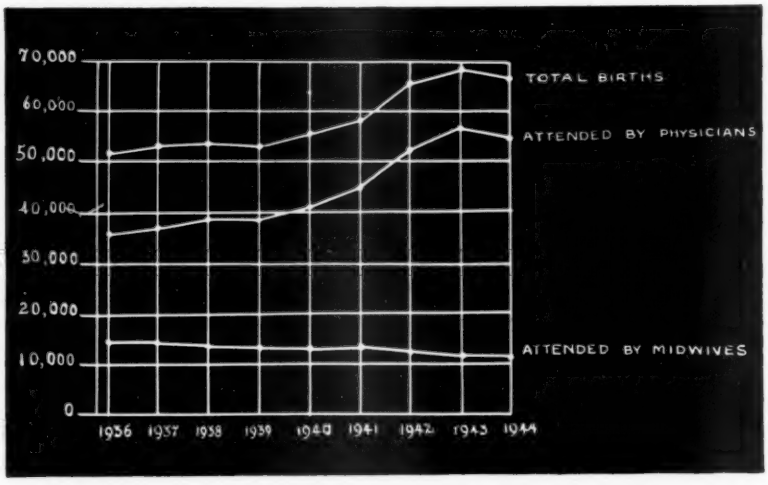
Gillenia is the name of North American perennial herbs of the rose family, commonly called Indian physic. Both species are woodland plants suitable for the wild garden. G. stipulata is called American ipecac and G. trifoliata, or Bowman's root, is often called false ipecac. According to Gray, Gillenia is dedicated to A. Gille or Gillenius, an obscure German botanist or physician.

XUM

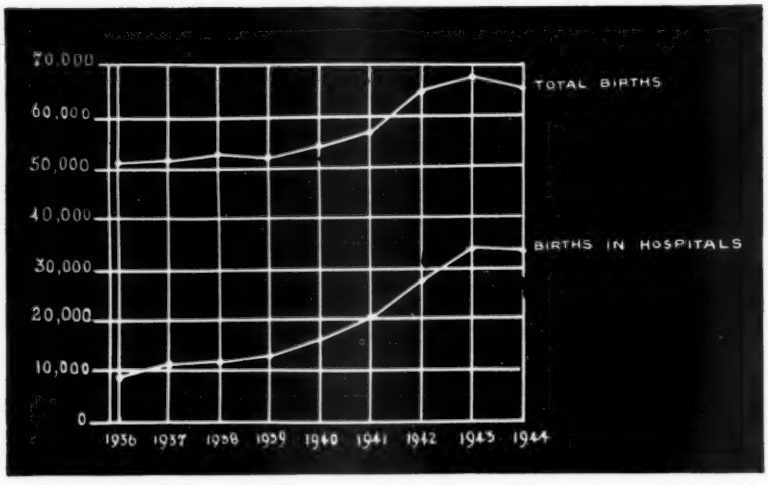
GRAPHS SHOWING NUMBER OF BIRTHS, ATTENDANTS, AND PLACES OF DELIVERY

MATERNAL HEALTH COMMITTEE
MEDICAL SOCIETY OF VIRGINIA

This chart shows the total number of births, the number attended by physicians and the number attended by midwives, during the past nine years.



The chart below shows the number of births in hospitals during the past nine years.



PUBLIC HEALTH

I. C. RIGGIN, M.D.,
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for September, 1945, as compared with the same month in 1944, and for the period of January through September, 1945, compared with the same period in 1944, follows:

	Sept. 1945	Sept. 1944	Jan.-Sept. 1945	Jan.-Sept. 1944
Typhoid and Paratyphoid Fever	43	21	128	103
Diarrhea and Dysentery	1,772	1,205	6,227	5,249
Measles	19	22	1,255	17,031
Scarlet Fever	219	124	2,905	2,113
Diphtheria	67	37	233	191
Poliomyelitis	107	241	281	598
Meningitis	11	14	198	467
Undulant Fever	5	0	26	33
Rocky Mountain Spotted Fever	14	12	88	75
Tularemia	6	2	38	40

ACCIDENTS TAKE DEATH TOLL IN ALL ACTIVITIES

Last year in the State, deaths due to accidents of all types totaled 2,149. The rate per 100,000 population in 1944 was 76.8. With the exception of the year 1943, when the rate was 76.0, this was the lowest since 1939. Accidental deaths in the white race in 1944 numbered 1,640 (rate 77.2) and in the colored 509 (rate 75.2). This was the first year in which the white rate exceeded the colored.

The reduction in accidental deaths largely has been due to a sharp decline in motor-vehicle fatality. Deaths from this cause numbered 588 in the State in 1944 in comparison with 634 for the previous year. The upward trend during former years was reversed in 1942; and in 1944, the rate of 21.0 was the lowest in the past fifteen years. Less travel and slower rates of speed no doubt were contributing factors.

As a cause of accidental death, falls ranked next to motor vehicles, and in 1944 totaled 367. Next in order came burns (including conflagration) with 235 deaths. Water-transportation and drowning followed with 196 deaths. Air-transportation totaled 164 fatalities; railway accidents, 89; firearms, 63; mechanical suffocation (including infants overlaid in bed), 59; mine and quarry accidents, 52; poisoning by solids and liquids, 42; agricultural and forestry accidents, 41; accidents involving machinery, 26; and other and unspecified accidents, 227.

Home accidents, as usual, took a higher death toll than industrial. There were 641 fatalities occurring in the home in 1944, which represents an increase of 67 deaths over the previous year. Falls accounted for the largest number of home accidents, 265. Other accidents in the home causing death comprised burns, poisoning, suffocation of infants in bed, electric currents, and injuries from cutting instruments and from firearms.

Fatal *industrial* accidents showed a decline from 586 in 1943 to 538 last year. However, this num-

DEATHS FROM ACCIDENTS IN VIRGINIA 1941-1944

		PLACE OF ACCIDENT				
YEAR	TOTAL DEATHS	INDUSTRY	HOME	MOTOR-VEHICLE*	OTHER PUBLIC	OTHER AND UNSPECIFIED
1944	2,149	538	641	551	284	135
1943	2,181	586	574	609	298	114
1942	2,193	442	568	695	359	129
1941	2,486	385	572	1,048	304	177

*Figures for "motor-vehicle" exclude a small number of deaths included in industry, home and unspecified places.

ber represents an increase of 153 deaths over the last prewar year (1941). Accidental deaths occurring in industry were due mainly to air-transportation, water-transportation, railway accidents, accidents in mines and quarries, agricultural accidents, and falls.

Deaths from accidents occurring in *public places* (excluding motor vehicles) totaled 284. The highest toll in this group was due to falls, drowning, and railway accidents. Other and unspecified accidental deaths totaled 135.

Accidental deaths during wartime in Virginia, in comparison with the last prewar year (1941), are shown by place of occurrence in the table below.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President—MRS. P. M. CHICHESTER, Abingdon
President-Elect—MRS. J. E. HAMNER, Petersburg
Recording Secretary—MRS. NATHAN SCHUMAN, Alexandria
Corresponding Secretary—MRS. L. C. BRAWNER, Richmond
Treasurer—MRS. REUBEN F. SIMMS, Richmond

Report of President at 1945 Meeting.

As president of the Woman's Auxiliary to the Medical Society of Virginia it is a pleasure and honor to submit the following report for 1944-45 to the Medical Society of Virginia: At present we have nine well-organized Auxiliaries, with a total membership of three hundred and twelve paid up members. It has been my pleasure to visit most of these. To find them doing fine is great satisfaction. The participation in every phase of War activity is outstanding and 100 per cent. Each Auxiliary has sponsored a program on our major project for the year—The Prevention of Juvenile Delinquency from the Medical Aspect. In spite of the times our work has progressed steadily and satisfactorily. Only through divine guidance and the united efforts of officers and chairmen can the following activities be reported:

EDITORIAL—

Articles of interest from records of meetings have been published each month in the VIRGINIA MEDICAL MONTHLY, and sent to *The Journal of the A.M.A.* Announcements of all meetings have been published in the daily papers.

FINANCE—

A letter has been sent to Auxiliaries to remind them of the Maintenance Fund dues. All bills have been taken care of and the Treasury has a good balance.

HYGEIA—

All chairmen have been advised about the Campaign, and our membership has substantially increased over last year, and we have more prospects.

LEGISLATION—

Attended meeting of Virginia Women's Council of Legislative Chairmen and meeting of The League of Women Voters. Legislative Chairman holds herself in readiness at all times to help the Medical Society in any problems that may arise.

ORGANIZATION—

There are several fertile fields and the Chairman keeps an anxious eye on these and hopes something will materialize after the duration.

PROGRAM—

Programs on the Prevention of Juvenile Delinquency from the Medical Aspect and Physical Fitness have been sponsored. Chairmen suggests more wholesome recreation in the home, school, and church for youth.

Have conformed to programs supplied by National.

PUBLIC RELATIONS—

We have conformed to extensive list of programs and suggestions made by the National Auxiliary. Distributed circulars announcing Radio Net Work Broadcasts by A. M. A. and National Broadcasting Company.

REVISIONS—

Our committee is mindful of the opportunities and responsibilities that are theirs and hope to have a complete report with recommendations at the next meeting.

WAR SERVICE—

Every member is actively engaged in some phase of War work. Especial attention and courtesy is shown wives of the doctors who are in the Service. Monetary contributions have been made to Red Cross and Soldier Telephone Fund. Christmas trees, gifts, and cigarettes have been furnished Soldiers and Sailors in the various hospitals. U. S. O. suppers have been sponsored, at which members acted as hostesses. Sent Christmas cards to all doctors in the Service. Bought War Bonds, and many are checking food stores for O. P. A.

PARLIAMENTARIAN—

Our parliamentarian has attended all meetings and installed officers at the Annual Convention. Is most interested and cooperative.

HISTORIAN—

Presidents are urged to send clippings of interest for State Scrap Book, and happenings of value and interest have been recorded.

BULLETIN—

Reminders have been sent out soliciting new and renewal subscriptions with gratifying returns, as there is an increase over last year.

MEMBERSHIP

Objectives for the year:

1. To make every effort possible to retain the present membership intact.
2. To interest the wives of Service doctors in Auxiliary work.
3. To add to the membership whenever possible.

CANCER CONTROL—

Members have spoken before lay groups on the topic, literature has been distributed. Each Auxiliary has made contribution to the Financial Chairman when the drive was on.

LEIGH-HODGES-WRIGHT MEMORIAL BED FUND—

This Fund was originated to aid financially an ill doctor or his dependent. A senior Medical Student was hospitalized at one time for many months. Auxiliaries have been reminded that this fund is available at any time an emergency may arise. Annual volunteer contributions are made.

JANE TODD CRAWFORD MEMORIAL—

The fund has substantially increased this year. It is hoped this will someday materialize into a living memorial to this great heroine and Virginian by birth.

Our year has not exactly followed the usual pattern, for many new situations and problems have been encountered, but I am sure we will all measure up to our responsibilities, with a real display of initiative and resourcefulness.

I cannot express adequately my gratitude to the Advisory Council for their counsel, cooperation, and encouragement on all occasions, and to my Official Family for their loyalty, cooperation and kindness, for they have made possible whatever success may have been attained this year. Surely no president has ever had a more agreeable and happy family.

Little by little the time goes by, short if we sing through, long if we sigh; and little by little, an hour, a day, and another year has passed away.

VIRGINIA PEARSON
(MRS. PAUL C.)

Annual Meeting.

As has been announced, the Auxiliary could not arrange for a general meeting this Fall but held a meeting of its Board and chairmen of committees in Richmond October 16th, with the Auxiliary of the Richmond Academy of Medicine as hostess. Following the business session, luncheon was served in the dining room of the Academy.

Mrs. P. M. Chichester was installed as president for the ensuing year and the following were elected to serve with her: President-elect, Mrs. J. E. Hamner, Petersburg; vice-presidents, Mrs. R. B. Hightower, Alexandria; Mrs. A. S. Lilly, Richmond; Mrs. W. Carey Henderson, Nassawadox; and Mrs. Henry Townsend, Marshall; recording secretary, Mrs. Nathan Schuman, Alexandria; corresponding secretary, Mrs. L. C. Brawner, Richmond; treasurer, Mrs. Reuben F. Simms, Richmond; parliamentarian, Mrs. E. Latane Flanagan, Richmond; and historian, Mrs. H. A. Latane, Alexandria.

XUM

NEW AND NONOFFICIAL WORDS

THE ANTIBIOTICS

The meteoric rise in the number of antibiotics bids fair to overwhelm us with their terminology, if we do not make an occasional brief survey of this field which promises a revolution in our therapy. Who knows but that one of these may surpass even penicillin in effectiveness. Below is a list of antibiotics. Some are highly toxic to man; some are bactericidal, bacteriostatic, or fungicidal. Their action is not yet understood; penatin may act by producing H_2O_2 by dehydrogenating glucose. They are being obtained from bacteria, fungi, and higher plants. Some are polypeptides, lipoids, pigments, unsaturated ketones, or quinones.

The presence of such multifarious bacterial and fungicidal chemicals and enzymes which are anti-antibiotic, indicates to our gross senses the bitter total war that has been waged since life began, between bacteria, fungi, and higher plants.

ANTIBIOTIC	SOURCE
Actinomycétin	Actinomyces, many species
Actinomycin	Actinomyces antibioticus
Allicin	Allium sativum (garlic)
Allopencillin	A variety of penicillin (X, III)
Aspergillin	Aspergillus flavus
Aspergillic acid	Aspergillus flavus
Chaetómin	Chaetomium cochliodes
Chloréllin	Chlorella (a green alga)
Chlóraphin	
Chrysogénin	
Citrinin	Penicillium citrinum
Clávacin	Aspergillus clavatus
Clavatin	Aspergillus clavatus (same as Clavacin)
Clavifórmin	Aspergillus claviforme (same as Clavacin)
Diplocóccin	Milk streptococci
Flavicin	Aspergillus flavus
Flavicidin	Aspergillus flavus
Fumigácin	Aspergillus fumigatus (same as Clavacin)
Fumigátin	Aspergillus fumigatus
Gigántic acid	Aspergillus giganteus
Gliotóxin	Gliocladium fimbriatum
Gramicidin	Bacillus brevis (of soil)
Gramicidin S	Bacillus brevis (Russian strain)
Helvólic acid	Aspergillus fumigatus (same as Fumigacin)
Lycopersicin	Tomato plant
Lysozyme	Tears, saliva, egg white (avidin?)
Notátin	(Same as Penicillin B)
Parasiticin	Aspergillus parasiticus
Patulin	Penicillium patulum (same as Clavacin)
Penatin	Penicillium notatum (same as Pencillin B, Notatin)
Penicídin	Group of Penicillia (Australian)
Penicíllic acid	Penicillium cyclopium, puberulum, (thomii et al.)
Penicíllin	Penicillium notatum et al.
Penicillináse	Bacteria
Pneumococcus capsule lysing agents	Soil bacteria
Proactinomycin	Proactinomyces gardneri
Prodigiósin	
Puberulic acid	Penicillium aurantiovirens
Pyocyanáse	Pseudomonas pyocyaneus (bacterium)
Pyocyánin	Pseudomonas pyocyaneus
Pyocyanic acid	Pseudomonas pyocyaneus
Spinulosin	Penicillium spinulosum
Streptomycin	Actinomyces (Streptomyces) griseus
Streptothricin	Actinomyces (Streptomyces) lavendulae
Subtilin	Bacillus subtilis
Toxoflávin	
Tyrocidine	Bacillus brevis
Tyrothricin	(Mixture of Gramicidin and Tyrocidine)

Penicillin is found as three varieties, depending upon the method of culture: penicillins F, G, and X. The English, just to be different and incidentally more logical, use the comparable terms: penicillins I, II and III. Penicillin X is also termed *allopenicillin;* penicillin B is penatin; penicillin A is probably a mixture of penicillins I, II, and III. The penicillin-destroying enzyme produced by some bacteria is *penicillinase.* This may account for the lack of effect of this antibiotic on certain bacteria. Actinomycin is composed of actinomycin A—red, and actinomycin B—colorless.

BOOK ANNOUNCEMENTS

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Common Ailments of Man. Edited by MORRIS FISHBEIN, M.D. Garden City Publishing Co., Inc., Garden City, New York. 1945. 177 pages. Cloth. Price $1.00.

A Guide on Alcoholism for Social Workers. By ROBERT SELIGER, M.D., Assistant Visiting Psychiatrist, Johns Hopkins Hospital. In collaboration with Victoria Cranford, Psychotherapist and Rorschach Analyst, Haarlem Lodge, Catonsville, Maryland. Baltimore. Alcoholism Publications. 1945. 94 pages. Cloth edition $3.50; paper edition $2.00.

Common Ailments of Man. Edited by MORRIS FISHBEIN, M.D. Garden City Publishing Co., Inc., Garden City, New York. 1945. 177 pages. Cloth. Price $1.00.

This little book is written mainly for the laymen and consists of a collection of 16 articles which first appeared in the A.M.A.'s magazine *Hygeia*. The subjects covered are: The Common Cold, Backache, Headache, Hemorrhoids, Infection and Inflammation of the Nasal Sinuses, Allergy, Arthritis or Rheumatism, Neuritis, Varicose Veins, Anemia, Nephritis or Inflammation of the Kidneys, The Prostate Gland, High and Low Blood Pressure, Athlete's Foot, and Constipation. Each article is written by a recognized specialist in his particular field. The articles are plainly written and the average layman should have little if any trouble understanding the book.

The articles on athlete's foot, allergy, heart disease, high and low blood pressure, and anemia are particularly well written. It is regrettable that the value of a plain warm water enema has not been mentioned in the article on constipation.

Since this book is for laymen it will benefit every physician to read it carefully so that he may ascertain how much some of his patients can be expected to know about their diseases.

CLAYTON L. THOMAS.

Clinical Roentgenology of the Digestive Tract. By MAURICE FELDMAN, M.D., Assistant Professor of Gastroenterology, University of Maryland; Assistant in Gastroenterology, Mercy Hospital; Consulting Roentgenologist, Sinai Hospital. Second edition. Baltimore, The Williams and Wilkins Company. 1945. ix-769 pages. Illustrated. Cloth. Price $7.00.

This book is recommended to graduate physicians who wish to survey the gastrointestinal tract in a rapid fashion.

On page 28, the author lists five "roentgen signs" of the Plummer-Vinson syndrome. Reference to the original work of these gentlemen would disclose that there are *no* roentgen signs whatsoever. The author apparently gained his information from an article appearing in 1942 which he lists in his references. This list could be improved by omitting the misinformation and supplying the original work of Plummer and Vinson. The "History of Medicine" still remains the most important subject of the medical curriculum although the authors of textbooks and deans of medical schools fail to recognize it. Dysphagia incidentally is not a roentgen sign.

It would be helpful if the roentgen findings in scleroderma were all contained in the same section of the book. Instead, on page 68 there is a description of scleroderma of the esophagus with illustrations of stricture and one reference to the literature. On page 749 more descriptions of roentgen findings of the esophagus and lower tract are added, with stricture of the esophagus not mentioned and three other references quoted. One would be more interested in what the authors experience has been or lacking that, which of the roentgen findings one should expect in view of the pathologic changes known to exist in this condition.

Figures 33 and 35 on page 32 are marked anteroposterior views when they have all the appearances of routine postero-anterior projections and one has been measured as though it were.

On page 121 we are told that "achalasia of the pylorus is a condition in which there is a failure of the pyloric sphincter to relax due to nerve degeneration of Auerbach-Meissner plexus". And on page 123 that "prepyloric ulceration, excluding tumor cases, are not any more malignant than ulcers elsewhere". Bold statements are these.

Under Meckel's diverticulum an illustration would help to visualize the roentgen findings. The discussion and references to the literature are appreciated as are those throughout the book.

The reviewer could go on indefinitely concerning the various subjects. Suffice it to say that careful proof reading by a friendly roentgenologist, a physiologist and a pathologist could make the "third edition" of this book the leader in the field. The author shows definitely that he is more familiar with the literature and the subject than writers of competitive volumes which have appeared recently.

F. B. M.

XUM

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The New President
Medical Society of Virginia

NO written record can ever accurately describe any individual. However, there are some whose character, personality, and walk in life are so clear cut and sure that they can be plainly seen and read by all. Dr. Julian Lamar Rawls is such a person. His biographical record suggests a background which should be given some credit for this.

Dr. Rawls was born in Carrsville, Virginia. His father was Dr. Gavin Rawls, an honored physician who was typical of the so-called country doctor of his day. His mother was Susan Norfleet Rawls. One ancestor was an officer in the army of the Revolution. His grandfather served in the Confederate Army. Dr. Rawls married Elizabeth Carlos of Baltimore and has two children, Mary Eleanor and Elizabeth Rawls Longua.

Dr. Rawls' education was not confined to schools although he did make excellent use of a number of outstanding institutions which included Franklin High School, University of Richmond, and the Medical College of Virginia, where he graduated in Medicine in 1904. He was an interne and later house surgeon at St. Vincent's Hospital in Norfolk and has practiced in Norfolk continuously since that time. From the beginning, his trend has been towards surgery which has occupied his entire time in recent years.

Dr. Rawls' contribution to medicine, as well as his outstanding personality and character, inevitably brought him into prominence in his profession as well as in the community as a whole. He is now or has been president of eleven different organizations which included: The Norfolk County Medical Society, President, 1922; Seaboard Medical Association of Virginia and North Carolina, President, 1939; Southeastern Surgical Congress, President, 1942; The American Association for the Study of Neoplastic Diseases, President, 1943; Norfolk Cancer Clinics, founder and president; Norfolk Community Fund, President, 1937-40; Tidewater Hospital Service Association, director and president since organization; Torch Club, President, 1943;

President of the DePaul Hospital Staff; President of the Norfolk Chapter of the Sons of the American Revolution, 1943; and now, President of the Medical Society of Virginia. He is a fellow of the American College of Surgeons and is a Baptist and a Democrat. He is a member of the Tri-State Medical Association of the Carolinas and Virginia; Seaboard Airline Railroad Surgeons; Surgeon U.S.P.H.S.R.; Lt. Com., U.S.N.R., 1934-40; Chairman of the Procurement and Assignment Service

JULIAN LAMAR RAWLS, M.D.,
President, Medical Society of Virginia

for the Second Congressional District, World War II; member of the Norfolk Yacht and Country Club; and American Medical Association. Dr. Rawls has contributed many valuable articles to medical journals on professional subjects.

It is obvious that the Medical Society of Virginia has again chosen one of this state's distinguished sons on whom to bestow the highest honor at its disposal, the Presidency of the Medical Society of Virginia.

C. J. A.

Another Mess of Pottage

SINCE the dawn of history a mess of pottage has been a term of reproach. It means something of little value that one foolishly accepts for something of great value in order to satisfy one's appetite for the time being. At one time the individual States of the Union had rights which were guaranteed by the Constitution of the United States. Some of these have been abolished by Constitutional Amendments, but this method is too slow and cumbersome for the present Federal Government. The mess of pottage technique has been perfected, and the original plan has been improved upon. Jacob got the pottage of red lentils out of his own garden when he bought Esau's

birthright. The Federal Government makes the States furnish the fixings and pays for the pottage out of the citizens' pockets. The usual formula requires the State to match Federal funds if it wishes to participate in the program that the Federal Government is promulgating. When the State puts up its part, then the Federal Government takes charge and says what can and cannot be done. If the State does not "come in", its citizens are taxed just the same, so that the majority of voters demand that the State participate so as to get back a part of his tax money. It matters not whether the individual likes pottage or not; he pays just the same, and considers himself lucky if he gets twenty cents worth of pottage for his tax dollar. In any event the State gives up the "right" that the Federal Government is after and loses that much of its birthright. The powers-that-be in Washington care not how big a mess of pottage is required in order to gain its end, for the citizens of the States pay the bill.

Just now Senator Pepper is cooking up a $50,000,000 mess in the form of universal obstetric and infant care. He admits that the fifty million is inadequate, and is only for a start. The E. M. I. C. now costs $43,000,000 a year, so it is evident that $50,000,000 is just a drop in the bucket. The Senator is frank in saying that when the measure is put in operation, the Congress will from time to time vote funds to cover the deficit. If he asked for sufficient funds at once, he might fail to get enough votes to pass the bill. If the bill passes, the Secretary of Labor will have full control of the practice of obstetrics and pediatrics all over the country. The individual States will be only "yes" men carrying out the orders of the Children's Bureau.

Marion Sims and the First (?) Successful Operation for Vesico-Vaginal Fistula

THE leading article of the August number of *The Mississippi Doctor* is a flowery account of Marion Sims and other nineteenth century pioneers. The author tells of Sims' effort to secure to Crawford W. Long the credit of being the first to use surgical anesthesia, but omitted to say that this article first appeared in the VIRGINIA MEDICAL MONTHLY (4:81, 1877). We can forgive him this oversight although he mentions the other journals that published Sims' articles. But, when he says that Sims was the first to cure vesico-vaginal fistula, we really must protest. We quote "But genius is not easily discouraged and Sims continued until May, 1849, when with 'palpitating heart and anxious mind' he found that he had cured Anarcha—the first time in the history of the world that an operation for vesico-vaginal fistula had been performed successfully." Marion Sims' great fame as a gynecologist does not need such misstatements. The record shows that John Peter Mettauer of Virginia had a successful case in 1838, George Hayward of Boston one in 1839, and Joseph Pancoast of Philadelphia one in 1847. About the same time (1845) Jobert de Lamballe in France reported that he was able to cure 13 cases and had *only* two deaths. Mettauer reported his first case in the *Boston Medical and Surgical Journal* (22:154, 1940). In 1847 he reported in the *American Journal of Medical Sciences* (14:117, 1847) six cases and was convinced that every case could be cured. In 1855 he reported (*Virginia Medical and Surgical Journal* 4:445, 1855) that he had cured 27 cases and had found two cases that were inoperable. He reported his cases in a matter of fact sort of way. His technic was not unlike that which Marion Sims later adopted. With the patient in the lithotomy position the fistula was exposed by retractors in the hands of two of his students. The edges were denuded with curved scissors and apposition was secured with pure lead thread. A straight silver retention catheter was placed in the urethra and held in place by a tape fastened front and back to an abdominal band. The patient was kept on her side during the after care.

XUM

Our Advertisers

During the war when our advertisers had little if anything to sell they continued to buy advertising in the MONTHLY. Needless to say we appreciate the very necessary support of our advertisers. Without them, the cost of the MONTHLY to the members of the Medical Society of Virginia would be prohibitive. Now that the war is over, and the manufacturers are beginning to have something to sell to the public, they are beginning to look for results from their advertising. Many of our advertisers in this month's journal are asking our readers to write for reference books, literature or samples. Won't you show them that you read the MONTHLY by responding to their requests? It costs only a few postal cards.

Society

The Southwestern Virginia Medical Society

Held its Fall meeting at Governor Tyler Hotel, Radford, October 4, with the president, Dr. W. A. Porter of Hillsville presiding. The following read papers at the afternoon session:

Dr. W. F. Hatcher of Roanoke—The Eye in General Practice.

Dr. R. M. DeHart, Radford—Management of Adenomatous Goiter.

Dr. H. H. Ware, Jr., Richmond—Ectopic Pregnancy.

Dr. A. D. Hart, University—Psychosomatic Medicine.

Following refreshments and dinner, the program was resumed and papers were presented by:

Dr. Arthur M. Shipley, Baltimore—Diagnosis of Surgical Abdomen.

Dr. J. Edwin Wood, Jr., University—Differential Diagnosis and Treatment of Coronary Disease.

Dr. W. A. Porter, Hillsville—(President's Address)—Some Observations on Pending Medical Legislation and Medical Trends.

Patrick-Henry Medical Society.

The business meeting of this Society was held at Broad Street Hotel, Martinsville, October the 12th, at which time the following officers were elected for the ensuing year: President, Dr. T. H. Dickerson, Martinsville; vice-president, Dr. J. T. Shelburne, Critz; and secretary-treasurer, Dr. W. N. Thompson, Stuart.

Norfolk County Medical Society.

The following is a list of subjects and out-of-town speakers to be presented by the Surgical Section before this Society, for three months:

November 26: "Carcinoma of the Rectum": Dr. Richard B. Cattell, Surgeon, Lahey Clinic, Boston.

December 17: "The Surgical Treatment of Duodenal Ulcer by Trans-Thoracic Vagotomy and of Cardiospasm by Cardioplasty": Dr. Keith Grimson, Assistant Professor of Surgery, Duke University, Durham, N. C.

February 25: "Skin Grafting": Dr. Kenneth L. Pickrell, Associate in Surgery, Duke University, Durham, N. C.

Mid-Tidewater Medical Society.

Dr. W. S. Cox of West Point presided at the annual meeting of this Society in Gloucester on October the 9th, at which time Dr. C. C. Haskell of Richmond presented a paper on Cardiac Stimulants.

At the business session, Dr. W. H. Springall of Gloucester was elected president for the ensuing year and Dr. M. H. Harris of West Point was re-elected secretary-treasurer. Vice-presidents from the various counties are: Dr. P. G. Pearson, Aylett; Dr. E. L. W. Ferry, Millers Tavern; Dr. R. D. Bates, Newtown; Dr. H. A. Tabb, Gloucester; Dr. R. B. Bowles, Mathews; Dr. J. R. Parker, Providence Forge; Dr. Clarence Campbell, Sparta; and Dr. Horace Hoskins, Saluda.

XUM

News

Medical Society of Virginia.

Although no general meeting of the Society could be held this year, due to lack of hotel facilities, the Society held business sessions at Hotel Roanoke on October 22 and 23, with a registered attendance of eighty-six. Dr. H. B. Mulholland of the University of Virginia presided over the Council and both sessions of the House of Delegates, minutes of which will be published in the December MONTHLY. Shortly before adjournment, Dr. Julian L. Rawls of Norfolk was installed as president for the ensuing year, and Dr. William L. Powell of Roanoke was named president-elect. Vice-presidents were elected as follows: Dr. J. D. Hagood of Clover, Dr. W. Lowndes Peple of Richmond, and Dr. W. C. Caudill of Pearisburg. The retiring president, Dr. Mulholland, was named delegate to the American Medical Association for years 1946 and 1947, with Dr. Walter B. Martin of Norfolk as alternate.

This was time for election of councilors from the odd numbered Congressional Districts, and the following were elected to this position for two years: Dr. R. B. Bowles of Mathews; Dr. Carrington Williams of Richmond; Dr. Walter A. Porter of Hillsville; Dr. Alex F. Robertson, Jr., of Staunton; and Dr. F. H. Smith of Abingdon.

It was voted to accept the invitation of the Princess Anne County Medical Society and of the Cavalier Hotel to hold the 1946 meeting at Virginia Beach.

Promotions.

The following promotions of Virginia doctors in the services have recently been noted:

Dr. Edward H. Williams, Richmond, to Colonel, AUS.
Dr. Ben L. Boynton, Norfolk, to Lieutenant-Colonel, AUS.
Dr. Fred M. Jacobs, Roanoke, to Lieutenant-Colonel, AUS.
Dr. Lemuel E. Mayo, Jr., Portsmouth, to Major, AUS.
Dr. Eldridge C. Simmons, Roanoke, to Captain, AUS.
Dr. Charles A. Young, Jr., Roanoke, to Captain, AUS.
Dr. Edw. E. Haddock, Richmond, to Lieutenant, USNR.

Dr. F. B. Mandeville,

For eleven years professor of radiology and roentgenologist at the Medical College of Virginia, has resigned and accepted a similar position at the Baltimore City Hospital.

Lieutenant Commander Chester L. Riley, MC., USNR.,

Of Winchester, serving with motor torpedo boat forces, accompanied the assault forces during the invasion of Borneo at Balikpapan and was present at the time of surrender of the Japanese in that area to the Seventh Australian Division. Prior to this operation Dr. Riley served in the South Pacific area, Australia, and the campaign of Philippine liberation. Civilians and prisoners of war in the East Indies area, as in others under Japanese occupation, were found to be suffering from severe malnutrition, intestinal disorders, and tropical diseases, with a high incidence of yaws, malaria and intestinal parasites.

Colonel Edward H. Williams.

With notice from the Public Relations Office of the recent promotion of Colonel Williams, came the following interesting story of his activities since entering the service:

In August 1942, he was assigned the huge task of organizing a neuro-psychiatric service within the AAF hospital, which he completed in the spring of 1943. With a staff of administrative and medical officers, the department became almost a hospital within itself. Overseas returnees diagnosed as mild neurosis, combat fatigue and other mental states are first interviewed individually by Col. Williams, who is chief of Psychiatric Services division. He, in turn, assigns specialists, who review cases and prescribe treatment for the patients.

Unique in the psychiatric service is the convalescent program. Since its opening, the colonel has laid stress on art and metal crafts, music, reading, entertainment and every type of sport, as a means of rehabilitating the patient. Statistics now show that nearly every patient returns to a normal, productive life upon completion of his treatment.

Mr. Joe W. Savage,

For seventeen years executive secretary of the West Virginia State Medical Association, has accepted a position with the National Foundation for Infantile Paralysis with headquarters in New York City. He has recently been released from active duty as Major with the Army Air Forces after serving for over three years with the AAF training

command for navigators at various air fields in Texas.

Mr. Charles Lively is now executive secretary of the West Virginia Association.

Southern Medical Association.

The Victory Meeting of this Association will be held in Cincinnati on November 12-15. The scientific program will begin at noon on the 12th and will continue through the 15th. The twenty-one sections will each have a full half-day session so staggered that there will be only three sections meeting at the same time. There will be the usual general public session on Tuesday evening, with the address of the President and followed by the President's reception and ball. On Wednesday evening there will be a general clinical session.

General headquarters will be the Netherland Plaza Hotel. Registration, information, technical, scientific and hobby exhibits, general sessions and most of the section meetings will be held there.

If you plan to attend this meeting and have not made reservations, get in touch with the Hotel Committee, Southern Medical Association, Dr. Robert L. Biltz, Chairman, 910 Dixie Terminal Building, Cincinnati 2, Ohio, immediately as hotel rooms available for this meeting are limited.

Dr. Charles H. Dow,

Recently released from service in the Armed Forces, is taking special work in otolaryngology at the Graduate School of Medicine, University of Pennsylvania, Philadelphia.

Refresher Courses in General Medicine.

The Department of Medicine of the University of Virginia in conjunction with the Medical College of Virginia is planning to offer an intensive two week Refresher Course in General Medicine every three months for the next year. These courses will be comprised of lectures, clinics, ward rounds, clinicopathologic conferences and round table discussions. The first course is planned from December 3 to December 15, 1945, at the University of Virginia and any physician wishing further details should address Box 1725, University Station, Charlottesville, Virginia. Those desiring information about the course to be given by the Medical College of Virginia in March and September should address Dean J. P. Gray, Medical College of Virginia, Richmond, Virginia.

While this course is planned primarily for returning veterans, civilians will be accepted insofar as places are available up to a limit of fifty.

Motion Pictures for Society Programs.

"Physical Diagnosis" is the title of a motion picture recently acquired by the American Medical Association. It was prepared by Drs. Gordon B. Myers, Fred J. Margolis and Muir Clapper of Wayne University College of Medicine, Detroit. It requires about four hours to run, but portions of it may be used at different times.

Other motion pictures suitable for meetings of county or state societies are also available. Reservations should be made as far as possible in advance of the meeting with Thomas G. Hull, Ph.D., Director of the Scientific Exhibit, 535 North Dearborn Street, Chicago 10, Illinois.

Dr. and Mrs. S. E. Massey

Have returned to their home in Lakeland, Florida, for the winter, after spending the summer in the mountains of North Carolina, Virginia and West Virginia.

Released from Service.

In addition to names previously published, we have been advised of the release of the following members from duty in the services:

Dr. Walter P. Adams, Norfolk.
Dr. D. Coleman Booker, Richmond.
Dr. O. D. Boyce, Rural Retreat.
Dr. Alexander G. Brown, III, Richmond.
Dr. Charles H. Dow, Chilhowie.
Dr. Charles A. Easley, Jr., Chatham.
Dr. William J. Ellis, Covington.
Dr. Thomas S. Ely, Jonesville.
Dr. E. J. Haden, Ore Bank.
Dr. Guy W. Horsley, Richmond.
Dr. Ira H. Hurt, Roanoke.
Dr. E. C. Jamison, Rocky Mount.
Dr. Marcellus A. Johnson, Roanoke.
Dr. Wm. M. Junkin, Fredericksburg.
Dr. G. A. L. Kolmer, Salem.
Dr. C. H. Lupton, Norfolk.
Dr. C. F. Manges, Blacksburg.
Dr. J. L. Mann, Hampton.
Dr. J. R. Massie, Jr., Richmond.
Dr. Charles Nelson, Richmond.
Dr. E. W. Perkins, Richmond.
Dr. R. C. Potter, Marion.

XUM

Dr. Benjamin W. Rawles, Jr., Richmond.
Dr. Robert J. Scott, Onancock.
Dr. Girard V. Thompson, Chatham.
Dr. Elam C. Toone, Jr., Richmond.
Dr. William R. Watkins, South Boston.
Dr. Thomas Duval Watts, Richmond.
Dr. B. K. Weems, Waynesboro.
Dr. Ayer C. Whitley, Palmyra.

If there are others who have been discharged, please notify this office, so the membership files of the Society may be kept to date.

Dr. A. L. Carson, Jr.,

Has resumed his duties as Director of the Bureau of Maternal and Child Health of the State Health Department after a three months' leave of absence, during which time he was Acting Obstetrician-in-Chief of the Mary Imogene Bassett Hospital, Cooperstown, N. Y.

Salmon Lecture Series.

Dr. Roy Graham Hoskins, Salmon Memorial Lecturer for 1945, will deliver his lecture series, "The Biology of Schizophrenia", at 8:30 P. M. on the three successive Friday evenings of November 2nd, 9th, and 16th, at the Academy of Medicine, 2 East 103rd Street, New York City. Dr. Hoskins is internationally known for his contributions to both the neuro-endocrinological and physiological fields, has had many scientific affiliations and has been active in the journalistic field.

Dr. Sidney Trattner,

Recently with the Virginia Commission for the Blind, is now engaged in the private practice of ophthalmology in Fredericksburg.

The Second Inter-American Congress of Radiology,

Which was scheduled to be held in Havana next January, has been postponed to November 17-22, 1946. Further information with regard to the Congress may be obtained from the American College of Radiology, 20 North Wacker Drive, Chicago 6, Ill.

Dr. H. B. Luttrell

Announces his removal from Delaplane to Pulaski, where he is engaged in practice.

An Aid to Hospitals and "Dischargees".

Women have been stationed at five separation centers for the armed forces, with a view to assisting women dischargees in securing work, and they can be of great assistance to hospitals who need nurses, nurses' aides, technicians and other personnel. The separation centers are located at Fort Deal, California; Fort Bragg, North Carolina; Camp Dix, New Jersey; Fort Sam Houston, Texas; and Fort Sheridan, Illinois. Hospitals needing personnel are urged to communicate with the separation centers. These women advisors can be of mutual benefit to the hospitals and the young women who are now looking for post-war work.

"They Finished Their Job—Let's Finish Ours!"

The Victory Loan—last of the war loan drives—begins October 29 and ends December 8. The question will be asked "Why should people buy Victory Bonds after the war is over?" This is answered by the fact that the Treasury needs money for the following purposes:

1. Care of the wounded and rehabilitation of veterans.
2. Cancellation and termination of war contracts.
3. To prevent inflation.
4. Bringing men home.
5. Maintaining armies of occupation.

For these purposes and for self interest, every one is urged to buy.

Dr. A. Warren Rucker,

Located for sometime at Fieldale, is now in Nashville, where he recently underwent an operation. After recovery, he will take a postgraduate course in pediatrics, following which he will locate for practice in Martinsville.

Annual Clinical Conference.

The Chicago Medical Society will hold its annual clinical congress at the Palmer House, Chicago, March 5, 6, 7, 8, 1946. All physicians are invited to attend this conference and hear outstanding specialists from all sections of the country discuss subjects of major interest.

Seaboard Medical Association of Virginia and North Carolina.

Due to the fact that the reconditioning of the

Cavalier Hotel could not be completed in time, arrangements have been made to hold the 50th anniversary meeting of this Association at Pinewood Hotel, Virginia Beach, and dates will be December 11, 12 and 13 instead of those first announced. Although it is announced that there is ample room, reservations should be made in advance. An excellent social and scientific program is being arranged. Dr. A. A. Burke of Norfolk is president and Dr. Clarence Porter Jones of Newport News secretary.

Married.

Captain Nelson Montgomery Smith, MC., AUS., class of 1943, University of Virginia, Department of Medicine, and Miss Catharine Lee Palmer, Urbanna, October 11th.

Dr. F. B. Spencer, Jr., Salisbury, N. C., and Miss Ernestine Lewis, Tazewell, September 22nd. Dr. Lewis is a graduate of the Medical College of Virginia, class of '45, and is now serving an internship at the New York City Hospital.

Winchester Memorial Hospital to Expand.

According to announcement made by Dr. Hunter H. McGuire, President of the Board of Directors, arrangements have been completed for the enlargement of this hospital in Winchester. The expansion program will be undertaken in three phases. The first will be to provide thoroughly modern operating room units, a laundry, and enlarged kitchen and dining room space. Following this, plans provide for adding from 80 to 100 patient beds and enlarging the work space for the various departments of hospital activity. A modern pathological department will also be installed with the services of a full-time pathologist. Work will be started on the hospital at the earliest possible moment that construction material and equipment are available.

Dr. William Bickers

Of Richmond sailed from New York October 16th on the *Gripsholm*, bound for the American University of Beirut, Beirut, Lebanon. Upon request of the Near East College Association, he will act as Chairman of the Department of Obstetrics and Gynecology on a visiting basis, to aid in the post-war reorganization of the University Medical School. Dr. Bickers expects to return in the Spring.

The West Virginia State Medical Association

Announces that its 1946 meeting will be held at Hotel Prichard, Huntington, May 13, 14 and 15.

Dr. Guy W. Horsley,

Richmond, who was recently released from the Service, has been awarded the Legion of Merit, the Army's second highest award for achievement. He was chief of the surgical service of the 45th General Hospital and the award is being made for "exceptionally meritorious conduct in the performance of outstanding services". Dr. Horsley was especially cited for his devotion to duty "during the times of greatest stress immediately following the drive on Rome and the invasion of Southern France".

Dr. Horsley, who has been chief of the surgical service at McGuire Hospital since his return to this country, was the winner in the recent tennis tournament staged on the courts of that Post.

Dr. Patrick P. T. Wu,

Rochester, Minnesota, a graduate of the Department of Medicine, University of Virginia, class of 1928, will give a series of lectures for post-graduate instruction in surgical diagnosis for the Oklahoma State Medical Association. These courses are being given to approximately 1,000 physicians in the State of Oklahoma.

Dr. J. Lawson Cabaniss

Of Roanoke, who has been in active service since September 1942 and now a Commander in the Medical Corps, USNR, is stationed at the Navy Yard Dispensary, Washington, D. C. where he is Head of the Eye, Ear, Nose and Throat Clinic.

He returned to the States in January after an 18 months tour of duty in the S. W. Pacific where he was stationed respectively on New Caledonia, Guadalcanal and Bougainville. At the latter he was Head of the Eye, Ear, Nose and Throat Department in a base hospital.

News from the University of Virginia, Department of Medicine.

The Virginia Society for Crippled Children and Disabled Adults, on October 2nd, awarded to Dr. Hugh Page Newbill for the work of the Anti-Convulsive Clinic the sum of $7,500 for the year

XUM

1946. From other sources so far this year this clinic has received donations in the amount of $2,629.

Dr. Gayle Crutchfield and Dr. Fletcher D. Woodward spoke before the Ear, Eye, Nose and Throat Society in Raleigh, North Carolina, on September 27th.

The sum of $10,000 has been provided in the will of the late Mrs. Sallie B. Twyman as a memorial to her late husband for the establishment in the Medical School of the Frederick W. Twyman Fund, the income to be applied for research in cardiovascular disease under the direction of the Department of Internal Medicine.

Dr. Carl W. LaFratta,

Richmond, who has just been released from Service in the Armed Forces, has been appointed acting medical director of Pine Camp Hospital, to fill the vacancy created by the resignation of Dr. B. B. Bagby, Jr., who has moved to Milledgeville, Georgia. Dr. LaFratta was on the clinical staff of Pine Camp before entering the army, and will hold the present position until a permanent medical director is obtained.

The 12th Annual Post-Graduate Course,

Sponsored by the Virginia Society of Ophthalmology and Oto-Laryngology, will be held in the Baruch Auditorium of the Medical College of Virginia, December 3, 4, 5, and 6. The speakers on Oto-Laryngological subjects will be Dr. Oscar V. Batson, Philadelphia; Dr. French K. Hansel, St. Louis; Dr. A. C. Furstenberg, Ann Arbor, Mich; Drs. Walter E. Dandy and Stacy Guild of Baltimore; Dr. Julius Lempert, New York; and Dr. George E. Shambaugh, Chicago. Ophthalmologists on the program are: Dr. Frank B. Walsh, Baltimore; Drs. Raymond L. Pfeiffer and Daniel B. Kirby of New York City; Dr. Peter C. Kronfeld, Chicago; and Dr. James N. Greear, Washington, D. C.

For further information, communicate with Dr. E. Trible Gatewood, Professional Building, Richmond 19, Va.

For Rent—

In Newport News, the office of the late Dr. W. J. Knight. Good opening for young doctor just beginning practice or for a doctor desiring to make a change. Contack Mrs. W. J. Knight, 2405 Chestnut Avenue, Newport News, Va. (*Adv.*)

Wanted—

Association in Group Practice by University of Virginia graduate with three years hospital training in and two years private practice of Pediatrics. Four years experience in general medicine during recent Army Service. Address "Pediatrician", care this journal, 1200 East Clay Street, Richmond 19. (*Adv.*)

Established Hospital for Lease.

A Sanatorium for nervous, mental, alcoholic and drug cases doing an excellent business to a reputable physician or medical group. Dr. E. W. Stokes, 923 Cherokee Road, Louisville 4, Kentucky. (*Adv.*)

Obituaries

Dr. Hugh Carter Henry,

Commissioner of the State Department of Mental Hygiene and Hospitals, died at his home in Richmond on October 14th. He was seventy years of age and graduated from the Medical College of Virginia in 1896. In 1903, Dr. Henry was appointed first assistant physician at the Central State Hospital in Petersburg, and in 1924 was made superintendent of the institution, succeeding the late Dr. William F. Drewry. He continued as superintendent for more than ten years, resigning to accept the position as first commissioner of the State Department of Mental Hygiene and Hospitals. Dr. Henry was regarded as one of the outstanding psychiatrists in this country. He was a member of the American Psychiatric Association, the Southern Psychiatric Association, and a past president of the Virginia Neuropsychiatric Society. He had been an active member of the Medical Society of Virginia for forty-eight years. His wife and two children survive him.

Dr. Frederick Gochnauer,

Of Upperville, for forty years a practicing physician in that section, died October 9. He was sixty-six years of age and a graduate in medicine from the former University College of Medicine, Richmond, in 1903. After serving an internship at the college hospital, he returned to his home in Loudoun County where he had since practiced. He was a member of the Medical Society of Virginia and several other medical organizations, and a high ranking Mason. His wife and two daughters survive him.